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ABSTRACT

Economics is an important part of the U.S. social studies core curriculum, and this book considers the role of economics education in the development of citizenship skills. Chapter 1 describes: (1) citizenship and economic literacy; (2) the amount of economics education to offer; (3) economics in relation to economic education; and (4) decision-making in terms of economics and values. Chapter 2 considers the status of economics education in schools and argues for a combination of economics education infusion into existing grades K-12 courses, along with a required high school course. Chapter 3 discusses economics instruction in terms of a model that centers on economic reasoning for effective citizenship and suggests teaching economics based on learning theory research and on established teaching practices. Chapter 4 examines: (1) evaluative materials selection techniques for teachers; (2) the economics content of social studies textbooks; (3) reviews of economics textbooks; and (4) other classroom materials, such as videocassettes and teacher's guides. Figures are included, and a bibliography of teaching materials and Educational Resources Information Center (ERIC) resources contains 288 references. (JHP)

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ECONOMIC EDUCATION FOR CITIZENSHIP

Steven L. Miller

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Economic Education for Citizenship

by Steven L. Miller

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About the Author

Steven L. Miller is executive director of the Central Ohio Center for Economic Education and an assistant professor of educational studies at The Ohio State University's College of Education. He is the author or co-author of numerous papers and journal articles on various facets of economic education. Dr. Miller served as guest editor of the summer 1987 issue of *Theory Into Practice*; the theme of this special issue is "Developing Economic Literacy." He is co-author and editor of a volume of learning materials for use in secondary schools, *Economics and National Security*; this book was developed at The Ohio State University's Mershon Center and is scheduled for publication in 1988 by Addison-Wesley. Dr. Miller also is co-author of a Master Curriculum Guide in Economics, *Teaching Strategies: High School Economics Courses*, which was published in 1985 by the Joint Council on Economic Education. In addition to his research, writing, and curriculum development activities, Dr. Miller has served as a consultant in economic education to many school districts and educational agencies throughout the United States.

Foreword

Schools in the United States are expected to educate students for responsible citizenship in a free society. Essential elements of this education for citizenship are knowledge of history and the social sciences (including economics), ability to use that knowledge to intelligently participate in public affairs, and interest in civic activity on behalf of both individual and community goals.

Steven L. Miller argues persuasively in this publication that knowledge of economics is an especially important part of the core curriculum of schools. He contends in the first chapter that economic literacy is an indispensable facet of general education for citizenship in the United States. In the second chapter, Dr. Miller describes the status of economic education in the curriculum of schools. Later portions of the book explain how the goal of economic literacy, as part of responsible citizenship, can be accomplished thorough curriculum development, classroom instruction, and educational materials.

This publication will be useful to various groups of readers. Economic educators will be interested in the synthesis of important research on curriculum, instruction, and materials; fresh research-based conclusions are presented, as well as suggestions about areas for future study and research. In addition, economic educators are likely to find the links to issues in the larger domain of social studies education to be useful. It is likely that educators in the social studies will learn more about the distinct viewpoint held by many economists and economic educators about the fundamental philosophy of economics and its relationship to citizenship education. They may discern opportunities to influence economic education with ideas and knowledge developed in their areas of specialty within the social studies. Finally, this book is likely to help teachers connect economic education with citizenship and employ effective teaching strategies and materials in the classroom.

John J. Patrick
Director, ERIC Clearinghouse for Social
Studies/Social Science Education and
Director, Social Studies Development
Center at Indiana University

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CHAPTER I

Economic Literacy and Citizenship

Western industry is running on empty. The strategic petroleum reserve is nearly depleted. Spurred on by the multiple economic crises created by the growing shortage of oil, the president commits the Rapid Deployment Force to seizing and holding the oil fields in Saudi Arabia. American naval forces on station in the Mediterranean and Arabian Seas support the troops already fighting in the Middle East with dozens of sorties from aircraft carriers in the task forces. Ready Reserve units are called to action. Several Army divisions are reassigned from Europe and Korea to bolster the soldiers opposing Syrian units that are reportedly moving to engage American forces near the Persian Gulf. Emergency legislation reinstating a military draft for persons aged 19 through 21 is before Congress.

Condemnation in the United Nations of the US action is deafening. Syria, Iran, Jordan, Libya, and Egypt pledge to the Saudis their support in repelling the American invaders. Some analysts fear a massive onslaught against Israel to force American troops to redeploy to meet the new threat.

Soviet reaction is worrisome. Moscow pledges large quantities of materiel to the Syrians. The Soviet naval forces deploy in a menacing posture near the Strait of Hormuz. The president warns the Soviets not to make a bad situation worse. The Strategic Air Command assumes the highest possible alert status. . . .

Of course, the scary scenario sketched above did not happen, but in the 1970s it was thought frighteningly possible, if not likely. The Rapid Deployment Force and strategic petroleum reserve were created with just such a situation in mind. Billions of dollars were committed to a naval expansion, in part because of the image of the "thin oil lifeline of tankers stretching halfway around the world." More billions were squandered on exotic energy projects that could prove economically feasible only if oil prices continued to skyrocket while world energy demand grew as before and reserves diminished.

All of this seemed prudent enough at the time. Readers will remember that twice in the 1970s supply interruptions produced lines at the gasoline pumps, rationing by license plate number and gas station hours, and world oil prices that quadrupled (after adjusting for inflation) during the next ten years. The crisis seemed also to have hit natural gas. Natural gas distributors stopped taking on new customers and shut off service to industrial and commercial users during several harsh winters. Sluggish economic performance and double digit inflation were also partly the result of the energy problem.

The crisis atmosphere was accentuated by the media and schools. For instance, as late as 1981 a special issue of *National Geographic* devoted entirely to energy suggested oil prices of $80 per barrel by 1985 and nearly complete oil depletion by the early 21st century.[1] In our schools teachers used some materials that taught students that natural gas would be virtually gone by the year 2020 and oil by 1985![2]

However, the basic fuel of the energy crisis was economic illiteracy. Without an understanding of the fundamental ideas of economics (supply, demand, markets, etc.), the citizenry was unprepared for the events of the energy crisis. To the economically illiterate, the disappearance of the crisis seems as befuddling as its sudden appearance. The residue of public fear and confusion remains, as indicated by calls for government action against oil imports in the wake of OPEC's recent attempts to rescue the imperiled cartel. Periodic predictions by some experts of a renewed crisis within the decade are a TV news staple.

To the economic educator the energy crisis is a clear example of why economics must be a part of everyone's education. It is an instance of how a populace failed to see that government policies would have unintended but inescapable results that the people would not knowingly have chosen. National leaders either did not realize the consequences of their policies or perceived that public opinion would not permit a better course of action. Indeed, the policies that ended the crisis were opposed by a substantial number of people for reasons that made little economic sense. It is unlikely that the general public understands what created the problem or how it was solved, because most citizens have no framework of economic concepts, no intellectual tools for organizing and interpreting the phenomena of the energy crisis or other economic events.

Multiply this instance of the energy crisis by one-half of the front page news stories from the last decade. The product is some measure of the importance economic educators see in basic understanding of economics. Inflation, recession, famine in Africa, "crisis" on the farm and in the "rustbelt," the federal deficit, the military budget, tax reform, the drug "crisis." All of these and more are issues that cannot be fully understood without using the intellectual tools of economics.

This chapter examines economic literacy and its relationship to citizenship. Section one presents the case for economic education. It provides a working definition of economic literacy for effective citizenship and explains what economics is about. Next, what students must know to be economically literate citizens is considered. The following section presents an example of the application of economics to decision making on an issue. Finally, the relationship between economics and values is briefly explored.

Citizenship and The Case for Economic Literacy

How economic literacy, the goal of economic education, is defined has implications for what and how economics should be taught. There is a growing consensus about at least some aspects of economic literacy, as demonstrated by comparing statements from three recent publications.

Symmes and Gilliard define economic literacy: "... a capacity to apply reasoning processes when making decisions about using scarce resources. Economic reasoning implies having the capacity to: define the choice-related problems which confront us; identify and rank criteria or goals which shape our choices; use knowledge (facts and concepts) to analyze the probable consequences of choosing each alternate; and take action based upon the evaluation of the costs and benefits of various alternate choices."[3]

Schug provides a statement of the objective of economic education which implicitly contains a definition of economic literacy: "[E]conomic education introduces young people to a highly useful way of thinking about basic issues and making personal and social decisions. An understanding and application of fundamental economic concepts and principles helps them in this decision-making process. The goal of economic education, then, is to foster in students the thinking skills and substantive economic knowledge necessary to become effective and participating citizens."[4]

Saunders has defined economic literacy in terms of the following objective of economic education: "... enabling students, by the time they graduate from high school, to understand enough economics to make reasoned judgments about economic questions . . . Learning to make reasoned judgments about economic questions will help students become more effective decision-makers and more responsible citizens."[5]

These definitions of economic literacy are quite similar. All suggest that there is some body of *economic content* that students must learn. Furthermore, the students must learn how to *apply* this body of knowledge to problems. This means that students must acquire the capacity to *analyze* new and unique problems, not merely interpret or understand the analyses of others. And students should be able to use their knowledge to make *reasoned decisions or judgments*. A discussion of these components of economic literacy is presented later.

For the moment readers should focus on the last aspect of the definition of economic literacy. Each of the documents cited above, either in the quoted reference or elsewhere, emphasizes that economic education will lead to more *responsible citizenship and effective participation*. It is hard to put too much emphasis on this last point. This claim comes close to being the *raison d'etre* of economic education and forms the core of the traditional rationale for economic education.

Economic educators typically present cogent reasons why economic literacy is critical for effective citizenship and participation in society. Consider that economics is pervasive, touching many elements of everyone's personal and social lives. As noted earlier, many (if not most) of the significant social issues confronting our society are fundamentally economic. It is difficult to envision how any citizen could reach sound conclusions on these issues without being economically literate. Moreover, economics constitutes a mode of analysis, a way to reason about issues. Thus, as is shown in more detail later, the ability to apply economic concepts and use economics as a process of reasoning are important to sound social and personal decision making and success in daily living. In sum, economics is a powerful tool for explaining the world around us. All students should have an adequate economic education, if they are to understand their world and act effectively within it.

These reasons are sound and significant, and certainly present a convincing rationale. However, in a world of scarce educational resources, a greater emphasis on economic education must come at the expense of other things teachers might teach and students might learn. Thus, one must ask whether the traditional arguments for economic education form a *special* case for it relative to other areas of instruction. This is unclear largely because the arguments for each discipline are very similar.

Very few educators in any subject, discipline, or educational program attempt to make the case for their particular area of interest based on the intrinsic value of the subject to be studied. There is nearly always a twin appeal for emphasizing a particular educational program: (1) it will help students as individuals function better in society and (2) it will serve some greater social purpose. Social studies educators have long attempted to justify social education on the basis that more effective citizenship will be produced to the benefit of the citizen and the society. Advocates of global education claim that the increasingly interdependent world requires people with a global perspective for their own good and for the good of the planet. Recent calls for more emphasis on science and mathematics have been couched in terms of improving both each individual's chances in a rapidly changing labor market and the economic competitiveness of the United States. And so it is with literacy programs, drug prevention education, and so on, including the traditional case for economic education, about which the introductory paragraphs of this chapter serve as an example.

It is appropriate that the justification for these educational areas should contain a claim that society will benefit from education for the individual. Without such claims it would be difficult to justify universal precollege education at no cost to the recipient. Precollege education would simply be recognized as a private good that each individual would purchase if she or he wanted it.

However, because advocates of each discipline make claims that *a priori* seem quite reasonable, we are left with the challenge of allocating scarce educational resources to alternative areas of education, a classic economic problem. Unfortunately, the question of how many resources to devote to each competing area cannot be answered at present with any precision based on research. The classic response from economic theory to such a question is that resources should be allocated in such a way that the situation cannot be improved by moving resources from one pursuit to another. For example, if one were to use some measure of benefits to society as a yardstick, educators should continue to shift resources (time on task, spending for materials, etc.) to mathematics instruction as long as these yield greater benefits than the lost benefits resulting from the removal of the resources from instruction in some other area. This shifting would continue until some optimal allocation of resources, as measured by the yardstick, is reached.

Thus, while educators can list the kinds of benefits and costs of various activities, there is no generally accepted yardstick of benefit to society and very little of the information needed to determine the relative benefits of shifting educational resources from one area to another. There is no study that can actually document a claim that shifting resources from, say, career education to drug prevention education will result in greater benefits to either the individual student or society as a whole. Costs and benefits are simply too hard (and perhaps costly) to measure. This is equally true in making the case for economic education. Ironically, one of the fundamental generalizations of economics cannot at present be used to answer an equally fundamental question about how many resources one should devote to economic education, although economic theory does point the way to how such a decision might be reached.

Nonetheless, it is clear that educational decision makers perceive a special need for economic education. State legislators, administrators, school board members, teachers, and educational funders are the decision makers concerning the allocation of educational resources. They have decided to increase the resources devoted to economic education.[6] For instance, more states are requiring a high school course in economics for graduation. The Developmental Economic Education Program (DEEP) of the Joint Council on Economic Education has expanded rapidly over the last few years. More teachers than ever are participating in economic education training programs and in the education programs of organizations, such as Junior Achievement. In this sense, the educational decision makers must perceive benefits to increased economic education relative to other endeavors, even though this judgment might be highly subjective.

In the absence of definitive data, and given the similarity of the competing claims from other educational programs, on what basis can these decision makers sustain their judgment? There are two additional and somewhat speculative arguments that, combined with the traditional rationale, present a special case for economic literacy *vis-a-vis* other possible areas of instruction.

First, *if* the claim that economics instruction does lead to better social decisions is true (an assertion that like many in education remains to be demonstrated conclusively), then some of the benefits of those better decisions can be estimated in dollars. For example, an econometrician might estimate the value to the economy of having avoided the policies that led to the energy crisis. If economic literacy would have indeed led to better policies, such a study would likely show the savings to be in the hundreds of billions of dollars over the last fifteen years. Other estimates of clearly erroneous policies could be added to this to achieve a truly impressive figure, one that other claimants for scarce educational resources might be hard pressed to match.

Second, with the exception of reading and mathematics, no other area of study can complement and support other areas of instruction as well as economics. Some educators teach subjects, for example government or history, without resort to much economics. But economic educators are correct to point out that such teaching is far less beneficial than instruction in the same subjects that includes economics. To cite a few other examples, career education generally has explicit economic components; drug prevention education can easily borrow on the decision-making aspects of economics; and global education must include economics in order to be accurate.

In sum, the traditional case for economic literacy, while sound, is not unique. It is similar to the rationales of advocates of other instructional areas, programs, or subjects. There is insufficient evidence and consensus on criteria for educators to decide objectively about curriculum priorities. But one can construct arguments that indicate a special case to be made for economic education based on its complementing other subjects, and for economic literacy based on its value to society. That education in economics is increasing can be viewed as evidence that others charged with evaluating the costs and benefits are concluding that more resources should be devoted to economics instruction in schools.

How Much Economics?

While there is a convincing case for emphasizing economic literacy in the curriculum of schools, many questions remain. One of these is evident in the definitions of economic literacy that were presented at the beginning of this chapter. For example, one states that students must understand "enough economics to make reasoned judgments."[7] How much is enough?

It might advance the discussion of this question to present a clearer picture of what economics is. A standard textbook definition is often something like "the study of the allocation of scarce resources to alternative and competing ends." Others, recognizing that economics has developed concepts and propositions that are very widely applicable, have simply defined the discipline as the "science of making decisions." A discipline might also be defined by the questions investigated and the methods used by the practitioners of the discipline. In this sense, economics is whatever economists do however they do it. No matter the definition used, it is clear that the tools of the economist are useful whenever choices are to be made.

In practicing what they do, economists have developed theoretical constructs, generalizations, and ways of handling data. The concepts that form the base of economic content might be seen in two dimensions, breadth and depth. Breadth is the list of major concepts students must know to be economically literate. These concepts have supporting subconcepts that, when mastered, deepen the understanding of the major concepts. For example, market structure is a major concept that focuses on the extent of competition present in a market. Supporting subconcepts, such as monopoly or oligopoly, refer to different kinds of market structures. Defining these various kinds of structures requires still other ideas (sub-subconcepts) such as barriers to entry and homogeneity of products. Certainly the economists that specialize in studying market structure could delve even more deeply using successive layers of ever more sophisticated theoretical constructs.

How might this mass of ideas, facts, and methods be organized for presentation to precollege students? And how much of it do they need for economic literacy? In the mid 1970s, the Joint Council on Economic Education performed the valuable service of commissioning several economists to create a guiding framework for economic educators. The first edition of *A Framework for Teaching the Basic Concepts* conceived the discipline as composed of four major parts: (1) twenty-four major economic concepts or concept clusters; (2) information about the major institutions in an economy; (3) concepts for measuring economic phenomena; and (4) concepts to evaluate outcomes of economic decisions.[8] It is especially important to recognize that the authors attempted to limit their document to what they viewed as the essentials for basic economic literacy.

Time will not be taken here to examine in detail the content of this pioneering document. Both editions (the second makes changes, mostly improvements on the original) are recommended.

Readers should note that the document unfortunately does not set forth generalizations drawn from research and the application of concepts to the real world. (The subject of economic generalizations is examined in more detail in Chapter II, which treats economics in the curriculum.)

Of particular interest are concepts identified in the *Framework*. The bulk of economics instruction centers on concepts, and it is concepts that are most readily transportable into other contexts or curriculum areas. There is broad general agreement among economic educators on the present *Framework's* response to the question of depth and breadth. A number of economic educators from around the country were asked for their views before the new edition was printed. Thus, the present *Framework* stands as a readily accessible, generally accepted guide to the essential components of economic literacy.[9]

Applying Economics to Economic Issues

The ability to use economics to analyze economic problems is also an essential step in reaching decisions. A specific example might be helpful. The next (final?) chapter of the story of the energy crisis is presented as an illustration. First, a brief explanation of the concepts used in this analysis is presented.

In introductory economics, students are taught that prices perform three essential functions: they ration available products and services among potential buyers, they create incentives, and they transmit information. Because all economic goods are scarce, there must be some way to decide who gets a particular item, and who does not. Prices ration scarce items among potential buyers by the expedients of willingness and ability to pay the market price. The market price (or market clearing price, or equilibrium price) is especially significant. It is that price at which the quantity buyers are willing and able to purchase equals the quantity sellers are willing to offer. Note that for any product or service there is some price at which the market will clear. There will be neither shortages nor surpluses.

As conditions change (that is the demand for or the supply of an item in a market changes), the market price rises or falls to exclude or include buyers or change the amount they purchase. A change in the price provides an economic incentive to participants to alter their behavior. For example, increasing relative prices for labor lead businesses to use more machines. Failure to do so may price oneself out of the market compared to one's competitors. Changing relative prices transmit information throughout an economic system signalling the need for greater resources here and less output there.

As OPEC reduced the amount of oil available on world markets (a decrease in the supply), oil prices on world markets rose. But because of United States government price controls on energy, prices faced by domestic producers and consumers were not permitted to rise as rapidly and, therefore, could not perform their normal functions. The signal of a rising price was absent. Buyers continued to try to purchase about as much gasoline as before, but there was less available *at controlled prices*. Price could not be used to ration the available supply at the controlled price, so other methods, such as waiting in line and limiting purchases, were used. Furthermore, there was no signal to domestic suppliers to produce more. The resulting shortage was interpreted by many as the imminent end to abundant oil and natural gas.

I recall an interview with a man waiting in a line at a gas station that was broadcast on national television. This fellow had a different view. He said essentially: "Just you wait. When gas prices get high enough there will be plenty of gas." He believed he was making a stinging indictment of the oil companies when he was actually pointing to a fundamental economic idea. Changing prices can eliminate shortages, *if* they are permitted to work.

Perhaps even worse, the price controls and some related policies, including one that taxed domestic production of oil while subsidizing imports, strengthened OPEC's hand. As early as 1974, economists were predicting that OPEC, like many cartels before it, would collapse. Cartels are unstable because total output must be restricted in order to maintain a higher price. That means each cartel member must accept a production ceiling that is generally less than its potential output. Any individual cartel member could benefit by cutting price just a bit and selling all that could be produced. Thus, there is tremendous pressure to cheat. By destroying the incentives to produce and conserve, energy policies made it easier for the cartel to forestall the inevitable cheating.

Many economists argued that the removal of price controls was the critical policy to be undertaken. This action was vigorously opposed by many. Some did not believe that higher prices would result in conservation. (In the jargon of economics, demand was price inelastic, meaning that the quantity people demanded would not be affected much by price.) Others, fearing that the world was simply running out of oil and gas, thought that the higher prices would enrich the oil companies while failing to change very much the amount produced. In other words, supply was price inelastic as well. Some believed OPEC was less an economically motivated organization than a political one. Thus, it was believed to manipulate oil production to achieve political ends.

However, price controls were eliminated eventually. The results seemed like magic. Higher prices rationed available supplies among customers, created incentives to conserve and produce, and signalled appropriate values for energy throughout the network of markets. Both supply and demand proved to be much more elastic over longer time periods than critics of decontrol had thought. For instance, the shift to smaller, more fuel-efficient cars took some time to develop, but did reduce demand significantly. Natural gas suddenly became so abundant that distribution companies were able to begin adding new customers. In addition, greater conservation and non-OPEC production put the cartel under pressure. The cheating started. World oil prices dropped precipitously. Gasoline prices fell to levels that were hardly thought possible.

Economic analysis, such as the foregoing, often has four distinct stages, assuming that one already understands the economic concepts to be used. First, select the appropriate concepts from the available set. Second, use the concepts to construct a hypothesis of what happened (or what would happen). Third, examine the available evidence to test the hypothesis. Fourth, determine the consequences of what happened (or what would happen).

The economic concepts used in the foregoing explanation are listed below.

market
supply
demand
price
incentives

rationing
market
cartel
changes in supply
changes in demand

price controls
shortage
elasticity

In addition, the narrative could have been replaced or supplemented with standard market model graphs ("supply and demand curves") which would have required the ability to interpret graphs.

Some might feel the list is a bit forbidding. It certainly helps to explain why many did not understand the energy crisis. From the point of view of the economic educator, the list is standard fare. There is nothing arcane about these concepts. They belong in every citizen's mental tool kit.

These concepts were used to construct a hypothesis of what happened. For example, by using supply, demand, market price, changes in supply (decrease in supply), and price controls, one is able to arrive at the conclusion that there will be an economic shortage, meaning a greater quantity demanded than quantity supplied at the controlled price. Or, one can arrive at the hypothesis that OPEC is deliberately withholding supply to boost price, not to punish the West for its pro-Israel policies.

Next, evidence was sought to confirm or disconfirm the hypotheses. Non-price rationing (waiting in lines, closing gas stations earlier) is clear evidence that the controlled price is below the market price. Cheating is evidence that members of OPEC are indeed behaving as economic rather than political actors.

Finally, one can predict consequences of actions or proposed actions. For example, price elasticity of supply and demand were used to present alternative views of the probable result of price decontrol. Predictions about the consequences of decontrol on OPEC's behavior were also made. Predicting consequences is especially important in reaching a decision or making a reasoned judgment. For in considering whether a present policy is better than some alternative, it often comes down to a comparison of the consequences of the two policies.

Reaching Decisions: Economics and Values

The comments made about the energy policies of the United States during the 1970s have been explicitly critical. That is due to my evaluation of the consequences of those policies and the alternative of price decontrol using criteria that have not yet been made explicit. To explicitly state one's criteria of judgment, and to measure the consequences of the alternatives against those criteria, are the final links in the chain of knowledge and skills necessary for economic literacy for effective citizenship as defined by the authorities cited earlier.

This approach is founded on the notion that economics can be used to analyze problems, but cannot generate ready-made conclusions to economic issues. It derives from the separation of "positive" and "normative" economics where positive economics refers to the scientific aspects of economics, the building and testing of empirical propositions. Normative economics involves reaching judgments on value-laden issues.

To return to the energy crisis, some of my criteria of judgment are the following: promote economic growth in the United States and abroad; promote stable prices in the United States and abroad; promote an efficient allocation of resources; and promote equity in the international distribution of income. Without reproducing the economic analysis here, I believe that such an analysis generates predicted consequences for a policy of domestic decontrol of energy prices, which exceeds the performance of the price control policy on all of these criteria. If this analysis is correct, then one who values these criteria is compelled to support the policy of decontrol. The analysis of the consequences using economics is positive economics. Stating criteria and reaching a conclusion based on how well the alternatives meet the criteria is normative economics.

This means that two people (perhaps economists) could reach precisely the same conclusions about the predicted outcome of alternative policies, but disagree about which policy should be followed. Consider a different set of criteria: promote growth in Saudi Arabia; promote the military strength of regimes that support the Palestinian cause; promote the stability of the Saudi monarchy; maintain low prices for current users of natural gas. With these criteria, the opposite conclusion must be reached, since controls on prices promote these objectives far better than decontrol.

It is simply the case that I value the first set of criteria more than the second. It is for the moral philosophers, not the economists, to justify one of these two sets of criteria as the better set.

Possibly one could believe that some outcomes from each set are desirable. Tradeoffs among desirable outcomes are a fact of life. One simply must decide if gaining a bit more stability in the Saudi regime is worth giving up some price stability in the United States and abroad. That all desirable goals cannot be pursued simultaneously, that what promotes one cherished goal may do so at the expense of some other sought after outcome, is one of the great lessons of economics and a key feature of economic literacy.

This example also illustrates that economic education for effective citizenship requires more than instruction in economic concepts. It necessitates helping students to apply those concepts and reach reasoned conclusions. Students must be able to generate alternative policies and evaluate consequences. Because of the critical nature of values in public economic issues and personal economic issues, the example also shows why one cannot simply rely on expert opinion. In short, students must be able to implement both positive and normative economics.

This approach to values and economic education has broad support among economists and economic educators, but it has its critics. For example, Romanish attacked widely-used textbooks in economics partly because of the emphasis on teaching positive concepts.[10] Scholars writing from the critical theory perspective dispute the entire positivistic tradition. The critical theory proponents also argue that there is no such thing as a value-free part of economics. Furthermore, there are economists arguing for the need to rethink and perhaps redefine the discipline, although their arguments have not yet (and might never) substantially changed the traditional discipline nor influenced economic education.[11]

Another criticism is lodged by those who argue that instruction for economic literacy must include certain "correct" conclusions. Clearly, these judgments contain implicit value positions, but the advocates of this approach are quite certain of the supremacy of the values inherent in the conclusions. By teaching the judgments directly, the students are saved the time and trouble of arriving at them on their own. And, there is less chance that they will erroneously arrive at the wrong answers. Thus, some would have economic educators teach students that free enterprise is good, or that capitalism is bad.

Such conclusions are very sweeping. There are others that are more comfortable in having students learn that certain specific policies are bad or good. An example of this might be: It is well documented in economics that minimum wages create unemployment, especially among the disadvantaged youth. Since nearly everyone agrees that these outcomes are bad, minimum wages should be abolished. Thus, it is perfectly acceptable to simply teach students that minimum wages are bad.

This sketches some of the controversy about economics and values. The arguments are really not exclusive to economic education. Critical theory advocates lodge similar objections to other curricular areas. Christian fundamentalists concern themselves with values in all aspects of schooling. (The questions raised about values and economics are discussed throughout this volume, especially in the section on economics in the curriculum.)

Summary

This chapter considers the case for economic education, especially as it relates to promoting citizenship. It is argued that the data are insufficient to compare properly the competing claims for educational resources. However, there are arguments and evidence that a special case for economic education can be made.

The chapter also examines what is meant by economic literacy, focusing on the knowledge and skills that many authorities believe are necessary. It bears repeating that economic education must focus on analysis and reaching reasoned conclusions. This has important implications for both curriculum design and teaching.

Finally, the chapter presents the treatment of values and decision making as advocated by the majority of economists and economic educators. Some of the controversy about this area is outlined in broad terms.

Succeeding chapters examine economics in the curriculum, economics instruction, and materials in economics. As these subjects are considered, readers should keep in mind the focus on economics for citizenship and decision making presented in this chapter.

Notes

[1] Kenneth Weaver, "Our Energy Predicament," *Energy: Facing Up to the Problem, Getting Down to Solutions* (Washington D.C.: National Geographic Society, 1981), 4, 16-17.

[2] Mary Jo and Harry Leavitt, "The Energy Crisis: An Introduction — Learning Activity Package" (Seattle, WA: Unigraph, 1977).

[3] S. Stowell Symmes and June V. Gilliard, "Economic Literacy — What Is It?" in *Economic Education: Links to the Social Studies* edited by S. Stowell Symmes (Washington D.C.: National Council for the Social Studies, 1981), 5.

[4] Mark C. Schug, "Introduction," in *Economics in the School Curriculum, K-12*, edited by Mark C. Schug (Washington D.C.: Joint Council on Economic Education and National Education Association, 1985), 6.

[5] Phillip Saunders, G.L. Bach, James D. Calderwood, and W. Lee Hansen, *A Framework for Teaching the Basic Concepts* (New York: Joint Council on Economic Education, 1984), 1.

[6] Specific evidence on the increased resources devoted to economic education is presented in several places in this monograph. For instance, see Chapter II for evidence on DEEP and the increase in state mandates.

[7] Saunders, Bach, Calderwood, and Hansen, *A Framework for Teaching the Basic Concepts*, 1.

[8] W. Lee Hansen, G.L. Bach, James D. Calderwood, and Phillip Saunders, *A Framework for Teaching the Basic Concepts* (New York: Joint Council on Economic Education, 1977), 8-9.

[9] While the *Framework* represents a consensus, there is still much research that should be done to demonstrate that these are the essential concepts, and not some others, or that there is sufficient depth to the concepts as presented. Also, see footnote 11.

[10] Bruce A. Romanish, "Modern Secondary Economics Textbooks and Ideological Bias," *Theory and Research in Social Education* 11 (Spring 1983): 1-24.

[11] The Spring, 1987 issue of the *Journal of Economic Education* (Vol 18, no. 2) is largely devoted to the proceedings of a conference dealing explicitly with redefining the scope of economics and the implications of such a redefinition for economic education. Many interesting points were raised, but it remains unclear how much force and acceptance the position of the critics of the *status quo* will have.

CHAPTER II

Economics in the Curriculum

This chapter concentrates on the curriculum implications of economic education for effective citizenship, albeit with an occasional reference to teaching and materials since the three are inextricably linked. Curriculum is examined first because in theory it drives both instruction and the selection and use of materials. However, educators know that this theoretical role of the curriculum is often honored in the breach. The research evidence shows that the curriculum is frequently whatever an individual teacher decides to teach or whatever is in the textbook. For instance, research on time devoted to different subjects by teachers in the same school district and grade level using the same curriculum shows wide variations from teacher to teacher.[1] Nonetheless, if educators are to deliver instruction according to some plan other than one based on the professional judgments of individual teachers and the content of textbooks, the curriculum will likely be the organizing force behind that plan.

This chapter does not dwell on the general problems of curriculum development. These are legion and have been written about extensively by educators who specialize in curriculum. It is sufficient to note that economic education is not immune to these problems. To cite just one example, McCutcheon notes: "Many curriculum scholars call for teachers to be involved in curriculum reform, but few teachers report they are vitally interested in it."[2] This poses problems since curriculum development efforts in economics, such as the Developmental Economic Education Program (DEEP) of the Joint Council on Economic Education, often rely heavily on teachers as participants in curriculum change.

In this chapter, the focus is on curriculum concerns that are more specific to economic education for citizenship. First, attention centers on infusing economics into the curriculum, kindergarten through twelfth grade. Of special interest is assessing the strengths and weaknesses of infusion, and DEEP as a model educators can follow in infusing economics throughout the school curriculum. Alternative infusion approaches are also discussed. The following section considers what a model economics curriculum might look like. Next, the curriculum of the high school economics course is examined. Another section concentrates on one area of economics education that is too often overlooked — the lack of emphasis on skills in handling quantitative data. Finally, consideration is given to controversial economic issues and values.

Economics, K-12

Economics is often thought of as a distinct subject largely taught in a discrete course at the high school level. However, it is also being taught as a part of various subjects in the curriculum at different grade levels. This section focuses on the infusion of economics throughout the curriculum, beginning with an examination of current patterns of infusion. Next, strengths and weaknesses of integrating economics K-12 and issues concerning models of economics curricular infusion are considered.

The available evidence shows that much of what students learn about economics comes in instruction in courses that are not primarily economics. An important national survey of secondary teachers (grades 6-12) found that 47% of those surveyed who said they were teaching economics were infusing economics instruction as part of another subject. Another 25% said they were both infusing economics and teaching it as a separate subject. Junior high school teachers were more likely to follow an infusion approach. Seventy-five percent reported teaching economics as part of another subject. The courses most often reported as the "host" courses were not surprising: U.S. history, 27%; U.S. government, 20%; consumer economics/education, 18%; social studies, 16%; world history, 11%; and civics, 10%.[3] Even in states that require instruction in economics, infusion is a popular approach. Brennan found that of 24 states that have an economics (or "free enterprise") requirement, 16 implement it, at least in part, by infusion.[4]

While there are no comparable data for the elementary grades, it is reasonable to assume that virtually all of the instruction in economics is integrated into the broader social studies program. Discrete economics courses are found almost exclusively at the secondary level. Furthermore, elementary social studies textbooks tend to emphasize the expanding horizons curricular pattern where the organizing force is the growing geographic horizon of the students. Thus, students begin in the primary grades by studying the family, the school, the community, and later, the state, the region, the nation, and the world. Economic concepts typically play only a supporting role in this scheme.

There are undoubtedly exceptions to this pattern. Some elementary teachers might be teaching discrete units on economics. Others might be using Marilyn Kourilsky's highly regarded Mini-Society program.[5] But most teachers follow the prescribed text.

In sum, it is safe to say that most teaching of economics at both elementary and secondary levels is integrated into some other course. However, this does not mean that infusion is the best or only approach. It remains to be demonstrated that economics ought to be taught to kindergarteners, or in any curricular area beyond the economics course. In other words, if economic literacy is the concern, why not simply require all students to take an economics course in high school and let it go at that?

There is no definitive answer to this question for the same reasons given in the first chapter. For instance, it has been shown, by Marilyn Kourilsky and others, that children as young as the primary grades *can* learn a great deal of economics content.[6] However, there is no evidence that students who have been taught economics throughout their careers learn economics in high school or college better than anyone else. Nor has it been demonstrated that infusing economics throughout the curriculum produces better citizens or individuals better prepared for life in an economic world. In the absence of such data there can be no definitive assessment of the relative costs and benefits of alternative approaches.

Nonetheless, one can cite theoretical strengths and weaknesses of the infusion approach. First and foremost among the strengths is the enriching effect of economics on other subjects, such as U.S. history. Every era of historical development has important economic aspects that are best understood from the organized framework that economics provides. For instance, the role of unions can be seen as an attempt to oppose the monopsony (one buyer) in employment with a countervailing monopoly. The industrial revolution can be understood better using concepts such as productivity and capital investment. In fact, it has been shown that failure to include economics in such courses can result in serious mis-teaching of historical events.[7]

Infusion of economics into courses such as U.S. history and government can strengthen the emphasis on citizenship development that is normally regarded as the reason for teaching these subjects in the first place. Consider the various functions of the federal government in regulating the economy. To the extent they are treated in government classes at all, the emphasis is likely to be on things such as the functions of parts of the executive branch. Education for citizenship would be improved by analyzing the economic issues agencies confront or evaluating government performance in macroeconomic policy, for example. This can only be done by importing economics into the government class and would require students to use both positive and normative economics.

Moreover, infusion multiplies the number of places where economics can be taught and the number of teachers involved. As Brenneke and Soper have noted: "Another benefit of the infusion approach is that all or most teachers in a school are potential teachers of economics. . . . A good infusion program may yield very high dividends, particularly in an elementary school setting, by focusing the attention of the entire faculty on economics as a significant curriculum component."[8]

There are potential weaknesses as well. Unless the economics curriculum is carefully crafted and teachers have the knowledge and materials to implement their respective portions of the curriculum, students are not likely to receive adequate instruction in economics. Research shows that there are problems in each of these areas. Discussion of teacher knowledge and materials is deferred to concentrate here on the curriculum.

There is an essential body of content necessary for economic literacy. A program of economics instruction based on infusion must ensure that the essential content is presented to all students. This also implies that content should build from one grade level or course to the next in a coordinated way. The available evidence shows that this is probably not happening. For example, Armento's examination of economics curriculum guides from schools with stronger economics programs concluded: "Concepts are dealt with at the introductory, definitional level — whether the guide is intended for the ninth or the twelfth grade. If this is the case, there must be an assumption by curriculum builders that prior instruction in economic education has not occurred."[9] The uncertainty of what students learn at different grade levels is compounded at the high school level where students divide into different "tracks" and take different elective courses.

Perhaps even worse, many teachers apparently do not realize the opportunities to infuse economics into their present courses. Recall the research that shows nearly half of the secondary teachers who teach economics infuse it into other courses, mostly in the social studies. The same survey asked teachers what subjects they teach that are "unrelated to economics." Fifty-one percent listed other subjects — including many of the same subjects that were the "host" courses for the infusion of economics by other teachers![10] Plainly, this implies that while some social studies teachers recognize the relationship of economics to history, government, and other social studies courses, many other teachers do not. This also suggests that using the infusion curriculum approach with these teachers might be extremely difficult.

The combination of these problems shows up as important gaps in student understanding of certain concepts. Walstad and Watts have cited research identifying specific areas of weakness. Among these are the entire areas of macroeconomics and public policy and certain specific concepts such as opportunity cost.[11]

Even if all the concepts are somehow presented in places where every student will have the opportunity to learn them, the problem of synthesizing the conceptual learning into an integrated whole remains. Walstad and Watts have noted that students who learn economics under the infusion approach are not likely to "acquire an overview of how individual concepts fit together in a meaningful whole."[12] This has serious implications for economic education for citizenship given its focus on reasoned decisions on social problems and the value-laden nature of economic issues. Economic analysis of problems frequently requires the abilities to realize the implications of actions in one arena on results in another, and to evaluate the consequences of alternative actions. Moreover, the evidence from the recent national norming of the revised *Test of Economic Literacy* (TEL) "strongly suggests that students who receive their economics education through infusion in the social studies courses without a specific economics component learn significantly less economics than do students who take a separate course in the subject."[13]

To sum up, there are unique benefits of an infusion approach to the teaching of economics for citizenship, but there are also some serious weaknesses. However, the weaknesses are not necessarily inherent. Presumably, good planning and articulation across subjects and grade levels, sufficient teacher training, and quality instructional materials could make the infusion approach the preferred option. As it happens, there is a model program that attempts to implement each of these elements — the Developmental Economic Education Program (DEEP) from the Joint Council on Economic Education. This program is examined before turning attention to other options, including alternative infusion approaches and a required high school economics course.

DEEP: An Infusion Model

DEEP is a significant program with a long history. Having started in 20 school districts in 1965, DEEP now enrolls more than 1375 school districts with some 15 million students. It is more appropriately thought of as a process rather than a specific program. Each individual school district develops its own plan of economics instruction that includes three major components: curriculum development, teacher training, and improvement of materials. Each DEEP district presumably has at its disposal the services of one of 50 state councils on economic education and some 270 centers for economic education. This support and advocacy network puts DEEP in sharp contrast to many other social studies education projects, notably the curriculum materials developed and promoted as part of the "new social studies" in the 1960s and early 1970s.

The evidence on the effectiveness of DEEP is generally positive, but might not reflect the full value of the program. A summary of research on DEEP from the Joint Council on Economic Education shows that students in DEEP districts learn significantly more economics than students from districts that do not participate in the program. However, even studies that show the success of the program point out that there are serious research problems in attempting to quantify specifically the value of the program.[14] For example, some studies measure the effect of the participation of a school district in DEEP on student economic knowledge. These studies often include a binary variable for participation in DEEP as part of a regression equation that contains a number of variables designed to explain the various influences on student test scores. One major difficulty with such studies is that the binary variable simply does not truly measure the effect of a fully implemented DEEP. Some school districts are "paper DEEP districts," meaning that they are officially listed as participating, but really are not.

Other districts are in the very early stages of DEEP, but are treated as if the program were fully implemented. The inclusion of these districts has the effect of understating the value of DEEP.

Moreover, there are some other studies that do not clearly show benefits of DEEP. For instance, Watts conducted an extensive study of the relationship of DEEP to student understanding of economics in Indiana. He found that "the DEEP binary (variable) was not generally positive and significant, as it has been in earlier studies."[15] Here too, there are problems of interpretation of the research results. Watts points out that many of the variables entered into his models capture some of the effects of participation in DEEP, thus statistically draining explanatory power away from the DEEP variable. For example, if the regression model includes some measure of teacher understanding (a component of every DEEP), some of the effects of DEEP will be captured by this variable, making the coefficient for the binary DEEP variable smaller and perhaps statistically insignificant.

More research data generated through the national norming of the *Test of Economic Literacy* are on the way. These data might further clarify the value of DEEP. For now the weight of the evidence shows that DEEP does result in more economics learning. Additional research that more carefully divides DEEP districts into classes will also permit better estimates of the effects of this program.

Recent research by Brenneke and Soper on the development of DEEP in one school district does point out some of the problems that are encountered in implementing it and some recommendations.[16] They found that teacher training is crucial and must be widespread. Although 28% of the K-8 teachers in this district had formal economics instruction as part of the program, that was not sufficient. Second, teachers needed specific exposure to economics teaching materials, and especially the economics content of their textbooks. The teachers relied heavily on textbooks, but were unable to use the economics in their texts without significant help in identifying the economic content. Third, teachers must have strong incentives to include economics instructions, especially the inclusion of economics items as part of the district's testing program.

These caveats emerged from a study of a school district with a carefully implemented DEEP and a strong locally developed economics curriculum. Does membership in DEEP usually result in a stronger economics curriculum? Recall that DEEP relies on teachers to do much of the curriculum design in each district. It is not clear that teachers have the economic knowledge to build sound economics curricula. I suspect that most do not. Furthermore, as pointed out earlier, research evidence shows that teachers are not very interested in building curriculum. The only national research on the effect of DEEP on the curriculum shows very weak and inconsistent results.[17] Furthermore, a later section on a model economics curriculum will provide some additional reasons to believe that curriculum development might be the weakest part of DEEP. In sum, it cannot at present be concluded that DEEP districts have stronger economics curricula than non-DEEP schools.

A potentially attractive alternative to integrating economics in bits and pieces throughout the K-12 curriculum is to infuse it into other courses in discrete, intact units of instruction. This approach can avoid some of the problems of the infusion approach discussed earlier. For instance, discrete units, carefully crafted, might permit easier articulation from subject to subject and grade level to grade level, thereby providing greater assurance that all students will receive adequate economics instruction. Discrete units could also mitigate somewhat the problem of synthesizing the discipline into a more integrated whole. James E. Davis, in a report on teaching economics to young adolescents sponsored by the Foundation for Teaching Economics (FTE), points out that such units could most easily be moved into the social studies courses in grades six through nine where the traditional social studies curriculum is less settled.[18]

At the secondary level, integration of discrete economics units does not even require a close link to the host course. Consider, as an example, Junior Achievement's "Project Business." This popular, nationally distributed program uses volunteer business consultants to teach eighth-and ninth-grade students specified aspects of basic economics and business. Typically one class period per week over roughly ten weeks is devoted to Project Business, often in the eighth-grade U.S. history course. In the case of Project Business, a consultant's guide is used to direct the content of the program, although consultants are free to skip sections or substitute other material. Thus, as in the case of more general infusion approaches such as DEEP, there remains the risk of missing elements of economics and economic reasoning critical to effective citizenship.

One can conclude that infusion by discrete units still requires the units to be part of carefully planned economics curriculum.

The difficulties of producing such curricula locally are examined in the next section, which discusses aspects of a national model curriculum in economics.

A Model Economics Curriculum

The development of a model economics curriculum is a formidable task, far beyond the scope of this section. Furthermore, for many teachers the textbook is the curriculum, a subject that is developed more fully in Chapter IV, on economics materials. Also, only the written curriculum is considered here, despite much that has been written on the "hidden" curriculum and curriculum as a process in the classroom. Even given these limitations, it is still useful to have in mind what a model economics curriculum might look like. This section lists the criteria and elements that I believe curriculum developers in economics should consider. However, other curriculum issues, such as the role of values and the validity of economic content, are deferred to a later section.

Given the definition of economic literacy presented in Chapter I, the first and most basic pragmatic decision for economics curriculum writers is to determine what specific terminal objectives of economic understanding the curriculum is to achieve. A critical choice must be made between a curriculum based on attaining and applying concepts and one based on broader objectives, such as understanding and using generalizations. (Another alternative, using goals as terminal objectives, is discussed later in this section.) I believe the former is used more often, but that the latter is preferable.

Before the argument on this issue is presented, the distinction between the two types of curricula should be clarified. The concept-based curriculum emphasizes the teaching and learning of discrete concepts, such as scarcity or opportunity cost. Typically, a well-organized curriculum will "introduce" or "define" a concept at a particular grade level, "develop" the concept later, and, still later, "reinforce" the concept. In some cases the curriculum may even suggest places where a concept is to be "applied."

A curriculum based on terminal objectives, such as generalizations (or goals), uses concepts as building blocks to understanding and organizing knowledge at a higher level of generality (hence "generalizations"). "Increasing demand usually results in higher prices and a greater quantity supplied" is a generalization. It is founded on many concepts including markets, supply, demand,

and so on. However, the concepts are combined to produce a general statement, a generalization.

There are virtues to the concept-based approach. In some ways it seems easier to establish. The concepts are already identified, for example in the JCEE *Framework* mentioned in Chapter I. Many economics materials are organized on the basis of concepts. Also, there is less work to do than in the generalization-based approach. After all, generalizations (or goals) require curriculum developers to specify the terminal generalizations and then work backwards to specify which concepts are critical to understanding those generalizations and where to place those concepts.

But it seems to me that the curricula based on terminal objectives, such as the generalization-based curriculum, have one huge, overriding advantage. It forces curriculum writers to organize economic knowledge for students. This means that students should have a greater chance to see how the interrelated concepts of economics fit together. How else can economic educators hope that students will see that markets allocate resources or that excessive monetary growth leads to inflation? Such understandings are based on learning concepts, but cannot be reached by a curriculum that is concept-centered, for these understandings require the simultaneous (or successive) application of several concepts. Thus, the previously discussed criticism that the infusion approach fails to provide students with an integrated view of economics reflects the importance of the generalization-based curriculum.

Moreover, this virtue of the generalization-based curriculum is critical to economic education for citizenship. As the example of the energy crisis in Chapter I demonstrates, citizens cannot use isolated concepts to understand complex economic events. Generalizations, such as "prices controlled below the market clearing price, result in shortages," are far more useful in analyzing economic issues.

This advantage is critical when effective citizenship is the object of economic education. As the example of the energy crisis in Chapter I shows, citizens must use generalizations rather than isolated concepts to understand and analyze complex social issues. It follows that an economics curriculum based on generalizations is superior if effective citizenship is the goal.

Whether the economics curriculum is based on concepts or generalizations, there are several basic criteria any model curriculum must meet: appropriateness for grade level, completeness, accuracy, clarity, and adaptability. These are so obvious that they will require only a little elaboration.

Any model curriculum has to provide an economics scope and sequence that specifies what economics is to be taught where. In so doing it must take account of the abilities of the learners. This is easy to say and hard to do. It involves careful study of learning theory and research. Whatever content is specified, it must be thorough and accurate. As noted above, the research calls into question many of the present economics curricula on both counts. Because many teachers have little formal training in economics, any model curriculum must be extraordinarily clear. Finally, the model must be both specific, but adaptable to a wide variety of curricular patterns, especially at the secondary level.

These are heavy demands to place on any curriculum writers. But they serve to illustrate how important a national model can be, and why the curriculum component of DEEP might be its weakest link. The first four of the five criteria mentioned above apply equally to a locally developed curriculum. To ask a group of teachers and a center director (who might be an economist with no formal training in writing curriculum) to produce such a curriculum separately in each DEEP district is expecting a lot, probably too much. Hence, there is a need for a national model.

One such model has recently been developed by a group led by Beverly Armento.[19] This K-12 economic education curriculum is especially noteworthy for several reasons. First, it is an example of an alternative approach that organizes the curriculum around 25 goals representing terminal objectives that students are to achieve. As is the case with the generalization-based curriculum, the goals organize concepts into coherent, related bundles. Indeed, some of the goal statements are operationalized generalizations, that is they state what the students are to be able to do with a particular generalization. Second, the same logical organization of economics appears in the objectives for each goal. Each goal is subdivided into developmentally-appropriate objectives which contain the cognitive components necessary to meet the goal. Third, in this model careful attention has been devoted to learning theory and its application to development of a K-12 curriculum. The concepts and student activities contained in each objective are placed at suggested grade levels that are developmentally appropriate.

There are other models that are available or will be completed in the near future. The JCEE is developing another curriculum at present, as is the Ohio Council on Economic Education. Davis, in the FTE report, presents a model for economics curricula in middle schools that includes eight suggested generalizations as a guide to the selection of specific curricular content.[20] With the advent of these models, one can hope for stronger local curricula and research based on the success of the curricula in improving economic education and conformance with learning theory.

The High School Economics Course

As noted earlier, most students receive the larger part of their economics instruction in courses other than the discrete economics class. There is, however, a trend toward stronger state mandates regarding the high school economics course. A study of state economics mandates by Brennan and Banaszak in 1981 showed seven states with a required economics or "free enterprise" course. However, in the 1985-6 update, this had increased to 15 states.[21] Other states have taken different steps to strengthen the economics course. For example, Ohio now requires all high schools to offer and operate a semester-long principles of economics course, though students are not required to take it. Thus, the curriculum of the high school economics course deserves to be examined more closely.

John Morton, a director of a center for economic education and also an economics teacher in a high school, has written an excellent article on the economics course that contains sound practical advice based on his classroom experiences and data from his students' tests. He suggests that the high school course contain four elements:

1. Teach the basic principles of economics.
2. Reinforce the basic principles with various activities.
3. Have students apply economic logic to a wide variety of subjects.
4. Have students apply economic reasoning to hypothetical decisions they will make as consumers, workers, and citizens.[22]

There are three points about these suggestions that are especially noteworthy for economics teachers. First, Morton suggests principles of economics for all students, even those of lower ability levels.[23] This is significant partly because many teachers of economics prefer to emphasize "personal" or "practical" economics.

In their view principles of economics means theory that is dry and difficult. It is presumed to be easier for students to understand and more relevant to their needs to focus on financing a car or making a personal budget. Neither of these examples is really economics, nor do they contribute to economic education for citizenship as defined in Chapter I. Morton's data show that students of all ability levels can handle the supposedly more difficult content based on principles.

Second, economics teaching and learning can be active and participatory by using "activities" as a dominant mode of instruction. This requires economics teachers to break away from exclusive use of textbook treatments. More on this subject will be presented in subsequent chapters.

Third, the emphasis on application can help students to see that economic "theory" is not dry and irrelevant. Note that the recommendations above stress application to different subjects and to *decision making* in a variety of hypothetical situations. If students are to be able to use economics for reaching reasoned conclusions, they must practice doing so. To do so in a variety of contexts is consistent with the objective of economic education for citizenship.

Unfortunately, all teachers are not covering much of the important content in economic theory. As noted earlier, the data from the norming of the *Test of Economic Literacy* suggest certain areas of economics are not emphasized sufficiently in the high school course. Prominent among these is macroeconomics, the study of the functioning of the economy as a whole. This is not surprising. Macroeconomic theory is less settled than microeconomic theory. It is complicated by competing schools of thought and by greater complexity. Teachers surveyed about the areas their students had the most trouble understanding cited macroeconomic areas (monetary policy, conflicting economic theories, tax policy, and several others) far more often than most other areas.[24] Furthermore, there are comparatively fewer materials available to teachers seeking resources to supplement their textbooks.

Apparently, only better teacher training and access to better instructional strategies can remedy some of the problems mentioned. Teachers themselves seem to be aware of their need to learn both more economics content and how to use available resources. More than half of those surveyed said they needed additional training in economics content; nearly half wanted more training in how to teach economics.[25] One source, *Strategies for*

Teaching Economics: High School Economic Courses, provides a model syllabus for the principles of economics course and 22 specific strategies to enhance instruction.[26] In addition, some programs from the new *Economics USA* video series might also strengthen the economics offering. Additional sources are listed in the bibliography of teaching materials.

However, one of the deficiencies in the high school course is apparently the result of the inherent nature of the particular course presented. Consider two examples. Some economics courses are "consumer economics," which devote considerable time to consumer life skills. Junior Achievement's "Applied Economics" program includes significant attention to business concepts. The opportunity cost is plainly time devoted to economics. While students in these courses might be gaining valuable information in these other areas, the norming data from the TEL show that they are learning less economics than students in principles of economics courses.[27] This raises considerable doubt about the ability of these students to participate effectively as citizens.

Another weaknesses in relying *exclusively* on the high school economics course is the school dropout problem. Davis, in the previously mentioned FTE report, notes that while some 25% of the school population does not finish high school, the dropout rate prior to 10th grade is just 2%. Thus, he argues, "If we want all students to have some fundamental economic knowledge about the nature of the economic system and how it works, it is important to incorporate economics at the middle/junior high school level when the dropout rate is negligible."[28] Finally, because the high school course is most often placed in the senior year, reliance on it sacrifices the power and value of economics in support of other subjects, especially in the social studies, which students will have taken prior to the economics course.

In sum, the high school economics course is increasingly being required for graduation, although infusion remains the dominant approach. An economics course can be effective, if it covers the right material and is presented properly. There are some problems with current courses, but the only inherent ones seem to be associated with courses that include substantial non-economics content.

One final note before moving to some other aspects of economics in the curriculum. The foregoing presentation is not meant to convey that there is an either/or choice between the economics course and the infusion approaches. Advocates of economic education would clearly prefer both. An optimum program would probably include general curricular infusion, infusion in discrete units (perhaps in the middle school social studies courses), and a "capstone" economics course. This combination ensures that all students will receive instruction in economics and that economics will be presented early enough for it to have value in illuminating issues in other courses. Since students will have had substantial economics earlier, a combination would enable the capstone course to be a richer, more complex investigation focusing on reaching reasoned decisions on economic issues, as opposed to concentrating primarily on instruction in basic concepts.

However, given scarce educational resources, some school districts may be forced to choose. Any comparison of infusion with the high school course must consider costs of implementation. The study by Brenneke and Soper of a carefully nurtured DEEP in one school district raises significant issues concerning its cost-effectiveness: "The general conclusion, then, is not very encouraging. DEEP curriculum development may simply be too expensive, too time consuming, and too much for the average school system to implement *correctly*." They suggest that the return for the resources invested may be superior in some alternative approach.[29] Whether the development of a model economics curriculum will significantly reduce these costs and change this conclusion remains to be seen. Also, as suggested earlier, an alternative approach might be infusion in discrete units, conceivably a less costly alternative.

My reading of the evidence is that, where the economics course is required for graduation, and where that course is exclusively an economics course, student performance on tests is superior to those receiving instruction by infusion. However, this does not settle the argument. Test scores alone do not take into account other aspects noted above, such as the dropout rate.

Economics and Quantitative Data

The first chapter presents information on the essential content and skills for economic literacy drawn from the *Framework* document of the JCEE. One important area mentioned in the *Framework* has received scant attention in studies of economics curricula, teaching, and student learning — the area of measurement concepts and methods or, more broadly, skills in interpreting and using quantitative data. And yet, few in economic education would deny that this is an area crucial to student understanding of economics. This section argues that QD (quantitative data) skills fall into a "neverland" between the mathematics and the social studies curricula, much to the detriment of the economics curriculum and teaching.

It should be clear by now that most teaching of economics is by social studies teachers. The available evidence indicates an important gap between the teaching of computational skills to precollege students in mathematics classes and the development of QD skills for decision making in social studies classes. The mathematics curriculum and classroom materials, including most textbooks, typically stress mastery of computational skills. In the social studies, there is a long tradition of commitment to developing the decision making skills of students, but little emphasis on the skillful use of quantitative data. This is partly because QD is often regarded as the province of mathematics and because social studies teachers are generally unprepared to teach students how to use quantitative information. Consequently, neither mathematics nor social studies teachers have the clear responsibility, ability, materials, or time in class to teach students how to use quantitative data to make decisions. The resulting gap is manifested in the inability of students to select, interpret, and apply quantitative information to economic or other social problems.

The increased emphasis on "basics" might exacerbate this problem. This concern is explicitly noted in *A Nation at Risk* as the danger of emphasizing the improving of the basic mathematics skills of students with inadequate attention to developing the ability of students to use these skills to make decisions or solve problems in economics and other subjects. As stated by the report: "Some worry that schools may emphasize such rudiments as reading and computation at the expense of other essential skills such as comprehension, analysis, solving problems, and drawing conclusions."[30]

The ability to use quantitative data is critical to each of the "essential skills" mentioned in the report. If individuals can neither comprehend the relevant data nor use it to analyze the problem, their abilities to solve problems and reach conclusions will be deficient. They will find it difficult to understand or participate in the public debates on many significant economic and other issues that have important quantitative aspects such as nuclear arms control, the federal budget deficit, or whether the social programs begun in the sixties were effective. Skill in using QD is critical to economic education for citizenship as defined in the first chapter.

On the positive side, many of the materials available for instruction in economics include lessons based on the use of QD. Also, many recent secondary texts in economics emphasize QD skills, often in special "skill builder" sections. But, there is no evidence that lessons emphasizing quantitative skills are being extensively used or that much about it is formally included in curricula. In sum, this is an important area of the economics curriculum that needs much attention from economic education researchers and curriculum developers.

Values and the Economics Curriculum

Curriculum writers and developers of materials in economics have placed considerably more emphasis on the use of goals as criteria for evaluating policy outcomes as a way of reaching decisions, a crucial part of economic education for citizenship. The JCEE *Framework* stresses the role of broad social goals, such as growth, equity, and economic freedom. Many economics instructional materials have used a variation of the "five-step decision making model" developed in the *Trade-offs* video series.[31] This model explicitly uses criteria to evaluate the consequences of alternatives. The process is essentially the same as the one used as an example in the first chapter. Chapter I also notes that this approach implicitly contains a view of the role of values in the economics curriculum and embraces the standard economists' view of positive and normative economics. This same view is explicit in the entire preceding discussion of curriculum. This section develops these themes in more detail.

The goal of mainstream economics is to develop a science squarely within the positivist tradition. Most economists believe that economic theory and research reveal generalizations based on positive concepts that explain the world as it is. These concepts and generalizations are seen as testable propositions and predictions, just as propositions in the hard sciences can be tested.[32] For example, economists are willing to subject the idea that "at higher prices people want less of a given commodity" to scrutiny. Further, they develop theories to explain anomalous situations that must be integrated into the discipline. Thus, much of the work in macroeconomics in recent years has been devoted to handling the anomalies presented by the real world in the 1970s and 1980s.

Normative economics is sharply distinguished from positive economics. Kennedy has given a fairly standard definition:

> ***Positive economics*** is concerned with what is: for example, when the government enacts a policy, positive economics analyzes what happens in the economy in response to enacting this policy. ***Normative economics*** takes as a starting point the results of positive economics and is concerned with what ought to be: for instance, with whether or not the results of a certain policy are desirable. It is important to isolate value judgments so that persons responsible for making them (generally, politicians) can make decisions free of complications associated with positive economics.[33]

Economists often disagree on economic issues. Those disagreements can be about aspects of positive economics, for instance economic theory or the interpretation of evidence. Ultimately such disputes should be settled by better theories and new evidence. More often (or perhaps, more visibly) economists disagree on normative economics, for example on which policy is better. Those disagreements are fundamentally about values, that is about which outcomes are more desirable. As Watts has pointed out, "when economists speak about values and normative concerns they speak *not as economists*, and not with any special standing and expertise, but only as individual citizens."[34]

The implications for an economics curriculum that emphasizes effective citizenship implicit in this view are straightforward and clear:

1. The curriculum should clearly distinguish positive and normative economics.
2. The positive economics portion of the economics curriculum should focus on the teaching of generalizations and positive concepts given the state of knowledge in the discipline.
3. Economic education for citizenship must include the examination of economic issues, which requires attention to both positive and normative economics.
4. When dealing with economic issues, data and positive concepts should be used to analyze the consequences of alternatives. However, the normative side of the economics curriculum must clearly recognize that value positions determine the selection of the "better" policy outcome.

It is clear that in this view economic education is not meant to teach students what to value, nor which value is most important in any specific situation. In a sense, the role for values comes after the teaching of positive economics as students apply values as criteria in valuing. Social studies educators will recognize the potential correspondence of this view with "values analysis." Although value analysis goes beyond the stage of simply specifying values as criteria used to judge outcomes, it emphasizes the same rational approach to analyzing consequences and warranting beliefs that is so important in effective citizenship.

The discussion of curriculum thus far has been explicitly based on the acceptance of the positivist position. Because this perspective has the general support of most economic educators and American economists, it can be regarded as the traditional or standard view. But this does not mean it has been accepted universally. The next section explores some of the criticism of the traditional view and the implications for the economics curriculum and citizenship.

Criticism of the Traditional Approach

One significant issue raised by some critics is whether there is indeed a clear separation between the positive and normative in economics. For instance, Nelson and Carlson argue: "Ideology, then, as it is commonly used, might appear to be antithetical to economic education. Yet, any attempt at separation of ideology from economic education is fraudulent. Economics, far from being the pure truth, involves ideologies, some of which are contradictory and competing."[35] Thus, in this view, the positive aspects of economics are not value free since they are inherently influenced by ideology. Nor can economic analysis be free of values.

This means that positive concepts and generalizations cannot be taught as "fact" or "truth." The ideological nature of economics suggests that the concepts and generalizations of economics are based on assumptions and "implied theories of human nature and cause and effect" that are subject to challenge.[36] In this view, such concepts and generalizations are, at best, hypotheses subject to revision. At worst, they are really only narrow constructs from one ideological point of view that cannot represent the "true" nature of a far more complex reality. Moreover, it has been argued that any curriculum in the social studies that is essentially built on the structure of the social science disciplines cripple free social inquiry by restricting investigations to a single perspective.[37]

For these critics, basing the curriculum on economic "knowledge" (whether concept-based or generalization-based) is a fatal error. Analysis in the classroom by the use of standard economic concepts must also include rigorous questioning of the assumptions implicit in those concepts. The resulting analysis must clearly be treated as merely one hypothesis from one ideological perspective. Moreover, other perspectives must also be introduced.[38] In short, this view requires a complete reorganization of the economics curriculum based on the process of inquiry into the reality of the world from multiple perspectives.

Another challenge to the traditional view of values, economics, and the curriculum comes from the various "revisionist" camps in social studies education. It is far beyond the scope of this work to present a full description and critique of the work by scholars writing in this perspective. Their arguments are deep and complicated. But, because their work is relatively recent and has profoundly different implications for economics in the curriculum and, particularly, the role of values, a few comments are in order.[39]

First and foremost, note that many of the revisionists go beyond the claim that economics is ideological; they reject the whole notion of positivism. For them, not only is any distinction between the positive and the normative fictitious, but the very methods of science and the restrictions on the problems chosen for investigation (among other things) limit inquiry into the true nature of society and the relationships of humans in that society. The entire positivist process is riddled with values. The result is that positivist investigations are by their nature conservative endeavors that help to promote the existing state of affairs. This critique especially indicts social studies as social science and value analysis, the two closest social studies philosophical antecedents of economic education as it has been advocated by most professionals in economic education. It is also an indictment of economics as practiced by mainstream economists.

Second, scholars in this perspective have a fundamentally different view of decision making and education for citizenship. They argue that social education should be an agent of social change based on the exposure of the inequities of society as analyzed from many perspectives, including theories of exploitation and class dominance. This cannot be done in a curriculum based on the traditional approach to economics, decision making, and citizenship. As noted above, revisionists believe the traditional approach must serve to support the *status quo*. After all, decisions by citizens will have been constrained to problems defined within the existing social and economic relationships and by traditional, conservative modes of analysis.

Third, the gulf between the revisionists and the positivists is so great that it seems hard for proponents of opposing views to find common ground on which to argue with one another. The exchange of published arguments between Romanish on one hand (revisionist) and Watts and Walstad (economists) on the other is a case in point.[40] Romanish argued, in part, that using "critical theory" (a method of analysis from the revisionist view) he found economics textbooks to be biased. Watts and Walstad, arguing in the positivist tradition, said Romanish had not made his case. Romanish's reply reiterated that he was using a different mode of analysis.

Note that his reply rebuts the criticism by claiming a different set of analytical rules. No ground was yielded on either side. The implication is that mainstream economic education might be under repeated attacks that cannot be deflected by arguments within the positivist tradition in which economic educators are trained. Indeed, the real core of the arguments will probably turn less on the specifics of particular issues, like textbook bias, and more on the fundamental differences in the modes of analysis and their underlying philosophies.

Finally, the revisionist perspective must be seen as work in progress. Their ideas have not (as yet) met with wide acceptance. As Stanley has noted, they have much to do before their critiques can form the basis of alternative approaches in curriculum and instruction in economics or in the social studies generally.[41] Nonetheless, those interested in economic education curriculum development should at least be aware of the fundamental challenge to mainstream thought launched by those from the revisionist perspective.

Quite a different challenge to the generally accepted role of values in economic education is presented by those who believe that the curriculum should foster acceptance of our economic system. To proponents of this view, the superiority of a market system is abundantly clear. Preservation of the system demands that students learn to appreciate and accept the basic tenets of the system. And, preservation of the economic system is part of maintaining the health of the entire culture. Thus, curriculum (and instruction and materials) should promote student valuing of the system. Social studies educators might recognize how this view of values and economics corresponds to the "cultural transmission" approach to values instruction in the social studies.

This role of values in economic education must be rejected by those that I have argued hold the mainstream view. First, the "appreciation" approach violates the distinction between normative and positive economics held by the economics profession. Second, this approach runs counter to the view of economic education as education in the economic way of thinking. The purpose of economic education for citizenship developed in Chapter I makes clear that the focus should be on using economics to reach reasoned conclusions. Third, the research evidence does not show that instruction in accepting some set of values is effective.[42] Indeed, Walstad, the leading researcher in the area of attitudes and values in economic education, has concluded that to influence economic attitudes, one must focus on economic understanding (and not vice versa).[43] Thus, it is not clear that the "appreciation" approach could reach its goals.

To summarize, there is a mainstream view in economics education of the role of values in the economics curriculum. It is derived from the economics profession's distinction between normative and positive economics. Values are relevant in choosing among competing alternatives after data and positive concepts have been used to analyze alternatives. This distinction is consistent with economic education for citizenship as it has been defined here.

The traditional approach has been criticized for failing to acknowledge the ideological nature of economics, presuming that positive concepts can be taught as truths rather than hypotheses, and failing to explore other legitimate perspectives. The positivist approach has also been attacked by social studies revisionists who have a fundamentally different philosophical perspective. The revisionists, while not very influential regarding economics curricula at present, are active researchers and reviewers whose arguments will be difficult to rebut, in part because they stand on radically different ground. Finally, there is criticism from those who advocate what I have called the "appreciation" approach to economic education, which is similar to the cultural transmission view of values in the social studies. This approach is inconsistent with economic education as it is conceived by mainstream economic educators.

Summary

This chapter reviews a number of aspects of economics in the curriculum. It begins with an examination of the infusion of economics in the K-12 curriculum and emphasizes that this is the dominant model. Evidence on the nationally implemented DEEP of the JCEE shows that it is an effective program, but that it might be weakest in delivering strong curricula to participating schools. Aspects of a model economics curriculum are examined, and it is noted that several of these had been, or are being developed, which might remedy the curriculum weaknesses of DEEP.

Required high school economics courses are becoming increasingly popular. It is argued that those courses should be focused on economics principles and analysis of economic issues consistent with economic education for effective citizenship. The evidence shows that such courses can be effective with students of all ability levels. Elements of an effective economics course are presented as well as deficiencies in the way such courses are often conducted.

It is argued that a combination of infusion K-12, infusion in discrete units in middle school social studies courses, and a required high school course is the preferred choice. However, scarce resources might force districts to choose among these. A well-conducted, required high school economics course appears to produce higher test scores than infusion. However, that is not the only criterion on which such a choice should be made. In fact, the data do not exist to conduct a true cost-benefit analysis.

It seems that the area of skills in using quantitative data is an important but neglected aspect of the economics curriculum. QD often falls in a gap between the social studies and math curricula. There are materials in economics that contain lessons that stress the development of QD skills, but no evidence on how heavily such materials are used. There is virtually no research on QD in the economics curriculum or on the QD skills of students who have studied economics.

Finally, the role of values in the economics curriculum is explored. The dominant model is based on the positivist tradition of economics and the distinction between positive and normative economics. The chapter also presents a brief review of the challenge posed by critics of the traditional approach.

Notes

[1] David C. Berliner, "The Half-Full Glass," in *Using What We Know About Teaching*, edited by Philip L. Hosford (Alexandria, VA.: Association for Supervision and Curriculum Development, 1984), 54.

[2] Gail McCutcheon, "Curriculum Theory/Curriculum Practice: A Gap or The Grand Canyon?" in *Current Thought on Curriculum*, edited by Alex Molnar

(Alexandria, Va.: Association for Supervision and Curriculum Development, 1985), 45.

[3] Yankelovich, Skelly and White, Inc. *National Survey of Economic Education 1981* (Phillips Petroleum Co., 1981), 43-9. The data sum to more than 100% because some teachers reported for the several different courses that they were teaching.

[4] Dennis C. Brennan, *A Study of State Mandates for Economics Instruction: 1985-6* (New York: Joint Council on Economic Education). Nine states mandate infusion only; eight, a required course; seven, both infusion and a required course.

[5] Strictly speaking Mini-Society is an integrated social studies program that draws on many areas of the social studies. However, the dominant organizing force behind the program is economics and the amount of economics content in the program is far higher than in the typical social studies program.

[6] Kourilsky has pioneered the instruction of economics for elementary students and has published many studies based on her work. See for example Marilyn L. Kourilsky, "Children's Learning of Economics: The Imperative and the Hurdles," in "Developing Economic Literacy," edited by Steven L. Miller, *Theory into Practice* 26 (Summer 1987): 204.

[7] Steven L. Miller and Stephen A. Rose, "The Great Depression: A Textbook Case of Problems with American History Textbooks," *Theory and Research in Social Education* 11 (Spring 1983): 25-39.

[8] Judith S. Brenneke and John C. Soper, "Economics in the School Curriculum," in "Developing Economic Literacy," edited by Steven L. Miller *Theory into Practice* 26 (Summer 1987): 187.

[9] Beverly J. Armento, "A Study of the Basic Economic Concepts Presented in DEEP Curriculum Guides," *Journal of Economic Education* 14 (Summer 1983): 26.

[10] Yankelovich, Skelly and White, Inc., *National Survey of Economic Education 1981*, 43.

[11] William B. Walstad and Michael Watts, "The Current Status of Economics in the K-12 Curriculum" in *Economics in the School Curriculum, K-12* edited by Mark C. Schug (Washington D.C.: National Education Association and Joint Council on Economic Education, 1985), 14-15.

[12] Ibid., 16.

[13] Judith S. Brenneke and John C. Soper, "Economics in the School Curriculum," 187. Additional evidence on the weakness of the infusion approach is a major point made by John C. Soper and William B. Walstad, "What Is High School Economics?: Posttest Knowledge, Attitudes, and Course Content," dated February, 1987 and submitted for publication to the *Journal of Economic Education* (cited with permission of the authors).

[14] Readers interested in a fuller discussion of the kinds of problems encountered in assessing DEEP research should see the following articles: John C. Soper and Judith S. Brenneke, "The Test of Economic Literacy and an Evaluation of the DEEP System," *Journal of Economic Education* 12 (Summer 1981): 1-14; William Luker, "DEEP Revisited," *Journal of Economic Education* 15 (Spring 1984): 111-118; and William B. Walstad and John C. Soper "DEEP Revisited: A Reply," *Journal of Economic Education* 15 (Spring 1984): 119-122.

[15] Michael Watts, "A Statewide Assessment of Precollege Economic Understanding and Deep," *Journal of Economic Education* 16 (Summer 1985): 235.

[16] Judith S. Brenneke and John C. Soper, "A Qualitative Evaluation of an Intensive D.E.E.P.," paper presented at the Annual Meeting of the Eastern Economics Association, Washington D.C., March 6, 1987, 11-12.

[17] Steven L. Miller and Beverly J. Armento, "The Effect of the Developmental Economic Education Program on the Elementary Social Studies Curriculum,"

paper presented at the American Educational Research Association meeting in San Francisco, April, 1986.

[18] James E. Davis, *Teaching Economics to Young Adolescents: A Research-Based Rationale* (San Francisco: Foundation for Teaching Economics, 1987), 20-21.

[19] Beverly J. Armento, editor and project director, *Scope and Sequence for Economic Education K-12: A Proposed Framework* (Atlanta: National Specialized Center for Learning Theory and Economic Education, Georgia State University, 1987).

[20] Davis, *Teaching Economics to Young Adolescents: A Research-Based Rationale*, 66-67.

[21] Brennan, *A Study of State Mandates for Economics Instruction: 1985-6*, 3.

[22] John Morton, "The High School Economics Course Comes of Age," in "Developing Economic Literacy," edited by Steven L. Miller, *Theory into Practice* 26 (Summer 1987): 207.

[23] Ibid., 207. All economics courses at Morton's high school are a full year in length. This allows a portion of the course to be devoted to "personal" economics. But even courses for lower ability students (which do contain somewhat more emphasis on personal economics) are primarily principles courses.

[24] Yankelovich, Skelly and White, Inc., *National Survey of Economic Education 1981*, 58-59.

[25] Ibid., 86.

[26] John S. Morton, Stephen G. Buckles, Steven L. Miller, David M. Nelson, and Edward C. Prehn, *Teaching Strategies: High School Economics Courses (New York: Joint Council on Economic Education, 1985)*, 173-177.

[27] John C. Soper and William Walstad, "New Data on the Economics Affect of U.S. High School Students," paper presented at the annual meeting of the Eastern Economics Association, Washington, D.C., March 1987.

[28] Davis, *Teaching Economics to Young Adolescents: A Research-Based Rationale*, 52.

[29] Judith S. Brenneke and John C. Soper, "A Qualitative Evaluation of an Intensive D.E.E.P.," 12.

[30] National Commission on Excellence in Education, *A Nation at Risk* (Washington, D.C.: Government Printing Office, 1983), 10.

[31] *Trade-offs* (Bloomington, IN: Agency for Instructional Technology, 1978).

[32] Milton Friedman, "The Methodology of Positive Economics," in *Essays in Positive Economics* edited by Milton Friedman (Chicago: University of Chicago Press, 1953), 3-43.

[33] Peter Kennedy, *Macroeconomics* (Boston: Allyn and Bacon, 1975), 12-13.

[34] Michael Watts, "Ideology, Textbooks, and the Teaching of Economics," in "Developing Economic Literacy," edited by Steven L. Miller, *Theory into Practice* 26 (Summer 1987): 193.

[35] Jack L. Nelson and Kenneth Carlson, "Ideology and Economic Education" in *Economic Education: Links to the Social Studies* edited by S. Stowell Symmes (Washington, D.C.: National Council for the Social Studies, 1981), 83.

[36] Ibid., 86.

[37] Beverly J. Armento, "Promoting Economic Literacy," in *Social Studies and Social Sciences: A Fifty-Year Perspective* edited by Stanley P. Wronski and Donald H. Bragaw (Washington, D.C.: National Council for the Social Studies, 1981), 104.

[38] Jack L. Nelson and Kenneth Carlson, "Ideology and Economic Education," 94.

[39] Interested readers can find an excellent summary of many of the major arguments of the revisionists in William Stanley, "Recent Research in the Foun-

dations of Social Education: 1976-1983," in *Review of Research in Social Studies Education: 1976-1983* edited by William Stanley (Boulder, Colorado: ERIC/ChESS) 349-81. Some of what follows borrows heavily on Stanley's summary.

[40] Readers should examine the following three articles: Bruce A. Romanish, "Modern Secondary Economics Textbooks and Ideological Bias," *Theory and Research in Social Education* 11 (Spring 1983): 1-24; William B. Walstad and Michael W. Watts, "A Response to Romanish: Ideological Bias in Secondary Economics Textbooks," *Theory and Research in Social Education* 11 (Winter 1984): 25-35; and Bruce A. Romanish, A Brief Response to Watts and Walstad," *Theory and Research in Social Education* 12 (Spring 1984): 49-51.

[41] William Stanley, *Review of Research in Social Studies Education: 1976-1983*, 381.

[42] Michael Watts, "Ideology, Textbooks, and the Teaching of Economics," 194.

[43] William Walstad, "Attitudes, Opinions, and Economic Understanding," in "Developing Economic Literacy," edited by Steven L. Miller, *Theory into Practice* 26 (Summer 1987): 193.

CHAPTER III

Instruction in Economics

This chapter treats economics instruction, what and how teachers teach. To some extent, this is what economic education is, irrespective of definitions offered by economic educators and curricula written by committees or textbook writers. Thus, it is important to investigate classroom teaching practices and how to increase the quantity and quality of economics instruction related to more effective citizenship.

The chapter examines what instruction in economics should be like by considering these areas: (1) an instructional model based on the purpose of economic education; (2) a review of some basic principles of effective economics instruction drawn from research and learning theory; (3) some examples of effective instruction; and (4) typical instructional practices of classroom teachers. What is taught is influenced heavily by the materials teachers use, especially textbooks. While this chapter unavoidably touches on materials, a fuller discussion of that subject is presented in Chapter IV.

An Instructional Model

Economic education for citizenship presents some very clear implications for how economics should be taught. Chief among these is that instruction should help students to reach reasoned conclusions based on the application of economics to problems. As noted earlier, this involves the teaching of important concepts and the application of these concepts to specific problems. Moreover, it means using criteria as yardsticks to measure the consequences of alternatives. In this way students are practicing the method to be used in making decisions as informed citizens. Thus, economics instruction should emphasize both *content and process*.

A model of the economic reasoning process is found in *A Framework for Teaching the Basic Concepts*. There are five steps in the process:

1. State the problem or issue.
2. Determine the personal or broad social goals to be attained.
3. Consider the principal alternative means of achieving these goals.
4. Select the economic concepts needed to understand the problem and use them to appraise the merits of each alternative.
5. Decide which alternative best leads to the attainment of the most goals or the most important goals.[1]

Note that this is the process used in the example of economic reasoning provided in the first chapter. It figures prominently in many of the materials produced by the Joint Council on Economic Education and others.

I will argue that this decision-making model forms an instructional model. But first, permit me to add something of considerable importance to the "five-step" model. The last two steps are really more complicated (or should be more complicated) than might be inferred from the *Framework*. First, step four should properly include data or evidence as well as the application of concepts. This is especially important when economic theories conflict on a given issue or when theory points to the existence of both costs and benefits of a given policy, but does not determine the size of the costs and benefits. For instance, economic theory clearly suggests that policies to reduce pollution should be applied through standards that are successively more stringent until the point is reached where the costs of a more stringent standard equal the benefits created by that standard. Beyond that standard, the next most stringent standard will generate costs that exceed its benefits. While this theory is clear enough, it does not in itself provide the answer to a specific pollution issue. Data from the real world are needed to determine the point where marginal costs and benefits are equal. Thus, analysis of a specific economic issue requires both the application of concepts and the use of data or evidence.

Second, the fifth step also involves a third test of consequences against criteria, but only two are mentioned: (1) Which alternative meets the most goals? (2) Which alternative meets the most important goals? To this must be added a third point: How great are the costs and benefits of the alternatives in terms of the goals?

For example, suppose students were considering a choice between two policies, A and B, and were measuring their consequences against two criteria (broad social goals), equity and growth. Suppose further that the students decide that equity was the more important criterion and that their analysis (applying both concepts and evidence) showed that policy A promoted equity at the expense of growth; for policy B it was the other way around. Should the students therefore choose policy A? Not necessarily. If A costs a great deal of growth for a small gain in equity while B creates a great deal of growth for a small price in equity, one might very well choose B, in spite of the preference for equity over growth. So, one must also determine how great are the costs and benefits in terms of the goals.

The point in presenting these two somewhat complicated additions to the model, aside from their inherent importance to correct economic reasoning, is to underscore the significance of process in model economics instruction. If teaching students the process of economic reasoning is important to economic education for citizenship, the model must be carefully attended to by teachers.

Furthermore, I contend that this is more than a model of economic reasoning; it is also a model of economics instruction. It specifies a purpose, instructional components, and sequence. It is applicable to a variety of different courses and grade levels, partly because it is a decision-making model *and* an instructional model with great generalizability. While it does not answer all of the instructional questions that could be raised, it does point the way to many answers for teachers faced with implementing effective economics instruction. Here are some implications of the model for instruction. Bear in mind that they are general suggestions that might not fit a particular situation.

First, wherever possible teachers should organize instruction in economics around a problem to be investigated by the students. The organizing problem may be one that occurs in another subject or area of study, such as U.S. history or global education or in social studies units in the elementary grades. These are opportunities to infuse economics into another subject *and* practice the reasoning implicit in the model.

Second, students should receive specific instruction in problem definition, beginning in the elementary grades. The old saw "If you don't know where you're going, you're likely to end up someplace else" is applicable. If the problem is misspecified, the answers will lead us somewhere else. Learning to define a problem properly is an important skill that must be carefully nurtured.

Consider these two questions: How much should the minimum wage be raised? What should be done about the minimum wage? These two examples are plainly not the same problem. The first question is far more specific and precludes removing the minimum wage for any class of workers (or all workers) by the way the problem is stated. Unlike the second statement, the first assumes the minimum wage should remain. The second is far more general because it admits more alternatives.

This raises a third point, teaching about alternatives. Developing options to choose among is also a skill that must be developed through practice. Educators cannot assume that students will automatically be able to produce long lists of alternatives. After all, students have had extensive experience in responding to situations in which there seemed, without careful reflection, to be only one response: do as authorities have said, do as your friends do, do as you have done before. Following authorities, peer pressure, and habit do not help students to produce creative alternatives.

Fourth, teachers must work with students to promote careful analysis because of its crucial role in decision making and effective citizenship. Some teachers might be tempted to accept whatever students produce as long as they have arrived at the "right" conclusion. However, it is the process that students will likely retain, not the conclusions reached. Much like math teachers want students to show their work so that specific weaknesses can be identified, so economic educators should carefully examine how the students do analysis. One such device is the so-called "decision-making grid" presented in the *Framework*, as reproduced in Figure 1.[2] It should properly be viewed not simply as a format for students to use, but also as a formative evaluative instrument to check how well students are analyzing the consequences of alternatives.

For instance, if students were to incorrectly evaluate the consequences of one of the policies in Figure 1, this could be evidence of lack of student understanding of specific economic concepts or generalizations, or misreading of the evidence. In the specific example from the *Framework*, the "support egg prices" alternative cannot help domestic taxpayers. Thus, a "+" in that box would indicate a problem. Such errors by citizens on judging issues result in policies that do not promote the goals they favor.

Finally, it is important for teachers to use both personal and group or social decisions. Students must learn the significant differences between personal and social decisions. Chief among these is the role of valuing criteria. The order of priority of personal decision criteria is a matter of individual choice. The individual

Sample Decision-making Grid for the Egg Diversion Case

ALTERNATIVES	GOALS OR CRITERIA									
		Equity					Security			
	Efficiency	Help Domestic Producers	Help Domestic Consumers	Help Domestic Taxpayers	Help Foreign Producers	Help Foreign Consumers	Help Domestic Producers	Help Domestic Consumers	Help Foreign Producers	Help Foreign Consumers
Rely on competitive market forces (State A)	+	–	+	0	0	0	–	+	0	0
Support prices by state egg board purchases (State B)	–	+	–	–	–	+	+	–	–	+
Other										

Figure 1

may reach his or her own conclusion about a social issue as well. But a group decision about a social problem is bound to expose differing valuation of the social goals used as criteria. Students may find that group decisions turn on arguments about goals. They may also discover that their arguments mirror some of the disagreements on policy among national leaders and experts. Regarding economic education for citizenship, these are important insights. Students should have a clearer idea about the role of criteria when people disagree on social issues.

Clearly, students should be given the opportunity to practice the reasoning process early, often, and in a variety of contexts, including both personal and social problems. Students in the primary grades can begin with simple personal or family problems and can build skills in generating alternatives through activities, such as brainstorming. By the intermediate grades, students are ready to use the model in a wider variety of situations. The *Trade-offs* video series provides some excellent examples. Students are engaged in personal decisions in programs 2, 5, 7, 8, and 11. Group decisions are found in programs 3, 4, 6, 14, and 15. In each case the model can be used. Furthermore, many of the programs in the series call on students to generate alternatives, encouraging the development of that valuable skill.

To sum up, the economic reasoning model is also an instructional model. It suggests an organizing focus for economics that centers on making decisions about personal and social problems, and it implies specific instruction on the skills needed in each stage of the process. It is useful across grade levels and subjects.

The Model Applied to the High School Economics Course

The problem is likely to be the focus of economics in the elementary grades or when economics is infused in other courses simply because this is the context in which economics is most likely to appear. These courses or grade levels normally do not have discrete economics components. However, the role of the problem is a significant issue in the high school economics course. Should the academic discipline of economics or the economic problem be the organizing focus for planning instruction in the high school course? For example, a teacher could try to engage students in an inquiry of what should be done about minimum wages. This inevitably would lead to examining the effects of price controls in general, and evidence on the minimum wage in particular. Alternatively, one might teach about price controls and then have students apply what they have learned to a series of issues — minimum wages, rent controls, and so on. The first is an example of organizing instruction around a problem; that is, solving the problem is the central focus of instruction. Students learn about price controls *in order* to be able to decide about minimum wages. The second is an example of organizing around the content of the discipline. Students learn economics in the traditional sequence, but with an emphasis on application and reasoning.

So which approach is preferred? To investigate this question, it might help to place economic education in the context of broader social studies education since this issue is a familiar one to most social studies educators. On a continuum of emphasis of either content at one end and process at the other, "traditional" teaching in the social studies is generally placed at the content end, while the pure "inquiry" approach is placed at the other.

Supporters of the inquiry approach have long held that instruction should be an investigation into a problem perceived by the students. Without a deep sense of need to inquire, true investigation cannot take place. Furthermore, such investigations are likely to be multi-disciplinary, bringing arguments, concepts, and data to bear from history or whatever social science is appropriate. The teaching of specific content is relatively unimportant. This is perfectly consistent with the emphasis in inquiry on process.

However, because the curriculum is typically organized, especially at the secondary level, into discrete subjects (for example, world history or government), approaches that consider themes or issues or problems in a multi-disciplinary way fly in the face of the traditional curriculum. Moreover, the traditional approach to teaching the social studies, as noted earlier, emphasizes the content of the subject being taught as opposed to investigation of a problem. Research into the practices of social studies teachers shows that the traditional approach still dominates (more on this subject shortly).

Economic education, as it has been described here, is located somewhere in the middle. It is squarely within the social studies education approach known as "social studies as social science" (or SS). With SS, there is an emphasis on learning the concepts of the subject matter (the content), but also on application in solving problems and reaching conclusions (the process). Thus, sociology courses are about doing sociology — the application of the concepts of sociology to social problems. Similarly, economics courses are about doing economics.

Note that under this approach, neither pure inquiry nor traditional teaching are logically possible. However, since we are working along a continuum, the question remains as to whether economics courses should edge toward the process (inquiry) side or the content (traditional) side. The following are tests for teachers to use as a guide:

1. How important is it that students determine the subject of the classroom inquiry?
2. How important is it for students to perceive a need to investigate a problem?
3. How important is it to cover the content of the discipline during the course?
4. How important is it for the teacher to feel in control of the day to day operation of the class?

To the extent that a teacher believes the first two are relatively more important than the latter two, he or she should lean hard to the process side. This can be done while maintaining the structure and sequence of the discipline and "covering" the important economics material. When moving into the teaching of a cluster of economic concepts (for instance, international trade), the teacher can offer a menu of economic issues in this area for students to choose among. For example, the teacher might list the following: Is the trade agreement with Canada in our best interests? What should be the position on trade of the US in the next GATT (General Agreement on Tariffs and Trade) round? What should be the US position on US trade with South Africa? With the Soviet Union? Any of these (and others) contain the opportunity to include instruction in important concepts related to international trade.

By selecting the issues for this menu carefully, the teacher can ensure that the appropriate content will be "covered" whichever issue the students select. The teacher might select issues thought to be related to student interest or needs. He or she can also work hard to "sell" the students on the importance of the problem(s) that will be investigated. Students will have a role in shaping the problem, in defining it and setting its limits.

For the advocates of pure inquiry, these steps are poor substitutes for the real thing since the basic SS approach is itself fatally flawed (in their view). But, given the SS approach, these steps might foster student engagement in the problem and emphasize the investigation of the problem (process) relative to teaching the content. In any event, teachers should remember that it is essential to emphasize content and process as equally important elements of education in economics.

The Model Applied at Other Grade Levels

The model can be applied to younger students, even children in the primary grades, despite the difference in their developmental levels compared to high school students. This section explores some of the aspects of using the model at other grade levels.

However, one should first note the support researchers have given to the basic thrust of the model. Marilyn Kourilsky has written unequivocally that "... even kindergarten children can master economic decision-making and some analytic concepts when provided with developmentally appropriate instructional intervention."[3] Thus, at the earliest grades we can begin economic instruction oriented toward reaching decisions. Beverly J. Armento has noted that the literature in problem solving "... suggests that two aspects of social science problem solving skills are general: basic knowledge of the physical and social world and knowledge of and ability to use general problem solving strategies." [4] This reinforces the model's emphasis on both content and process for all grade levels.

There are many activities and programs that have demonstrated that children in the elementary grades can engage in economic decision making. *Trade-offs* has already been mentioned. Other examples include Kourilsky's "KinderEconomy" (for primary grades) and "Mini-Society" (for intermediate grades). The key for all grade levels is "developmental appropriateness."

As noted above, Kourilsky focuses on the need for "developmentally appropriate" instructional intervention. This means that in applying the model the techniques used must be at the level of the students. For instance, Kourilsky's "Mini-Society" program begins when students eventually confront a scarcity situation in the classroom. The technique she recommends for the students to use in solving this situation contains the same essential steps as the model presented earlier. [5] Armento has suggested some other specific techniques that can be used to build the skills critical to the model. These include "talk-aloud" sessions, role-taking, looking at consequences, and speculating about long-term and short-term effects. [6]

Armento has also noted that the *problem* must be developmentally appropriate. She enumerated some of the relevant criteria in selecting a problem:

> Be sure that students understand the problem and that they have enough prior economic knowledge to critically assess the problem. Students at all age levels can deal with developmentally-appropriate problems, but even the simplest problems often demand a great deal of relevant information for their assessment. Students should be able to sort out the relevant from the irrelevant data, to visually portray the problem, and to identify the knowledge that will be needed for particular problems and the sources of data.[7]

Regarding middle school students, the same concern for matching the problem and instruction to the level of the student has been made in a research report sponsored by the Foundation for Teaching Economics. In the report summary, James E. Davis noted that "more recent, but less complete, research confirms that students aged 12 to 15 are capable of reflective reasoning."[8] However, the report warned that the students in this age group should be presented with concrete learning tasks because these students are "in transition from concrete to formal operational thought."[9]

The FTE report applied these conclusions by providing guidance on the "economic landscape" that might be used as the sources for problems to be investigated and economic content. Among these are institutions, products and services, and social roles that are familiar to students.[10] The key point is that the economic landscape can be used to provide problems to investigate that are concrete, and more likely to be appropriate for middle school students.

In sum, the instructional model emphasizes the knowledge, skills, and reasoning process that are critical to developing economic education for effective citizenship. It suggests an instructional sequence and the content to be taught. Clearly, the model can be used at all grade levels with correct attention to both the techniques used to implement it and the problems to which it is applied.

Learning Theory, Research, and Instruction

While the model above helps in many ways, it does not provide specific guidance on how to teach economic content, the concepts and generalizations that are used to analyze problems. For answers, or at least expert advice, one must turn to learning theory and research. Much of what follows relies on recent work by Armento, who has extensively researched the implications of learning theory for economics instruction, and Kourilsky, probably the leading researcher in the effects of specific teaching methodologies on student learning of economics.[11]

This is an area where more research is needed. Kourilsky has pointed out:

> The issue which remains problematic is how to teach the subject most effectively. The current research has not yet distinguished the program characteristics of a "very successful" classroom implementation from those of a "marginally successful" one. Teachers of economics who want to implement a successful elementary school program must therefore turn to fundamental learning principles for assistance.[12]

Cognitive learning theory emphasizes the importance of organizing content to help students fit new learning into existing knowledge. Armento has stated that how content is organized can affect student perception of material, attention to the task, and memory of what is presented. The significance of organization suggests to Armento several specific strategies that teachers could employ. First, especially with younger students, teachers should begin by asking students to recall previous learning of content related to whatever new material is about to be presented. Armento has stressed that this review should be by the students using their own words. This helps to provide a network into which the new knowledge will fit and increases student attention to the task and perception of the new material. Second, teachers should help students see the relationships between related concepts and ideas. This is especially important in economics where a specific structure ties together concepts into clusters and clusters together into a social science.

In presenting new ideas to students, it is important to omit detail and complications that are not necessary or not appropriate to the students' ability level. Where the information source (for example, textbooks) contains too much detail, the teacher must help students sort out the important from the less important. Armento has listed some common practices to achieve this: using study guides and outlines and reviewing as a class the major features of text material such as headings and italicized words. This is good teaching practice in any situation. But, economics teachers should find this suggestion of special value because of the density of concepts and related subconcepts in economics. Recall from Chapter I the example of concepts, subconcepts, and sub-subconcepts related to market structure. The teacher must help students navigate this maze of material. Incidentally, this puts special emphasis on the teacher's knowledge of economics, because he or she must know what can be safely omitted without distorting the picture.

When teaching concepts, learning theory points to careful attention to distinctions among the types of concepts. For instance, Armento has written that some concepts, such as goods, services, and consumers are "conjunctive concepts," which means that they combine two or more attributes in their definitions. For instance, "goods" are physical products *and* are made by humans. Conjunctive concepts are simple, clearly defined, and can be presented by either the example-to-definition or definition-to-example approach. By contrast, "disjunctive" concepts are complex:

> [Disjunctive concepts have] several alternative meanings, depending on [their] context. For example, we may wish to refer to regional or occupational specialization or even to specialized tools for certain tasks. The idea of multiple meanings for one word can be confusing to young learners. Concepts such as specialization are best learned when presented in a context. Case studies, pictorial examples, or vignettes are useful for showing alternative contexts within which the concept may occur.[13]

Furthermore, there are "relational concepts" which abound in economics, e.g. monetary policy, circular flow, market. These, according to Armento, have a "relational structure" and cannot be learned by simply defining them for students. With these more difficult concepts, students must understand how one idea relates to another. For example, demand is only understood when one comprehends how quantities demanded relate to various prices. Thus, these ideas must be thought of and taught in related clusters. Instruction must be "extensive and cumulative" emphasizing many examples and a variety of contexts.

Kourilsky has thought a good bit about specific techniques for teaching about particular concepts, especially in the elementary grades. Her research has led her to this conclusion:

> Children can learn economic concepts through a *variety of instructional methodologies* (i.e. didactic/ materials-based approaches, technological/ media-based approaches, and inquiry-oriented/experience-based approaches) even though certain instructional methodologies may produce better results than others.[14]

Research in economic education cannot with precision determine which of these approaches is necessarily best for particular content in a specific educational setting. But Kourilsky has offered specific suggestions drawn from research in learning theory.

She has argued that research on brain lateralization demonstrates that economics instruction must appeal to both sides of the brain; the left, verbal processing side and the right, spatial relations side. Thus, teachers should use a "two symbol systems" approach; for example, a verbal presentation that stimulates processing in the left hemisphere and graphical presentation stimulating the right hemisphere. Moreover, recent research supports these instructional practices:

> . . . the sequence in which the two symbol systems are used is important. Specifically, learning is greatly enhanced if the teacher uses a verbal presentation first (perhaps because of its familiarity) and follows it with an integrative graphic presentation. Although the reverse ordering is also superior to the use of a single symbol system, it is not as effective as the sequence in which the verbal presentation came first."[15]

Clear presentation using the two symbol approach is not enough, however. Students must be given ample opportunity to practice the use and application of the material presented. This is more than "time on task." Kourilsky has argued persuasively that the practice must be carefully guided and monitored. It must be targeted on the behavior that fits the instructional objectives. An example she provides is especially instructive. Suppose students are expected to be able to convert a demand schedule (a list of pairs, each pair giving a price and a quantity demanded at that price) into a demand graph (the familiar two-dimensional graph with price on the vertical axis and quantity on the horizontal axis). In this situation the teacher must focus practice time on the task to be mastered, converting the schedule to the graph, and monitor student responses to see that they are correct.

Kourilsky has also considered intellectual development in relation to specific economics content to be learned to form some careful suggestions on what content can be learned by students at various stages of development. All of her suggestions cannot be recounted here. But a quick example might stimulate readers to investigate her ideas more thoroughly. She has noted that at the preoperational stage of development (familiar to educators as one of Piaget's developmental stages), children have certain capabilities and limitations:

> [They] are still not capable of sustained, systematic thought. In the context of economics, children at this stage can understand that demand — how much people would be willing to buy at various prices — can be shown through a demand curve (that is, they can basically interpret a demand curve), but they would not be able to actually construct an entire demand schedule or convert a demand schedule into a graph.[16]

Much more of this kind of translation of theory into specific recommendations (which can then be tested) is needed.

In sum, there is a growing research literature on specific methodologies for teaching economics. But, at present, research in learning theory provides most of the guidance on model instructional practice. This research indicates that teachers must conceive of learning in economics as part of the students' cognitive network into which students must integrate new learning. Instruction should be organized to stimulate both hemispheres of the brain and, perhaps, sequenced with verbal presentations first. The kind of concepts being taught are important. Relational concepts, for example, require more thoroughness and context. Activities must allow for students to practice specific, targeted behaviors that are appropriate to the child's developmental level.

Examples of Effective Instruction

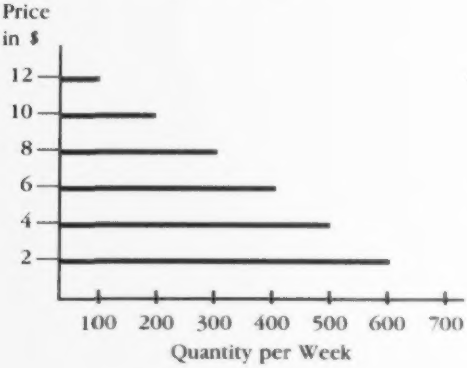
There are probably dozens of teaching ideas that economics teachers have found to "work" with their students. The evidence supporting the success of these methods is anecdotal, at best, based as it is on experience and the "feel" of how things are going in class. To the thoughtful and carefully researched suggestions of Armento and Kourilsky, I will add some specific suggestions that have no other empirical base than "they work for me." Out of the many possible candidates, I have selected three that illustrate more general prescriptions.

The first specific technique is to introduce supply and demand graphs by showing them first as bar graphs. More generally, this illustrates the principle of proceeding from the familiar to the unfamiliar. Bar graphs are the most familiar form of graph to almost everyone. Students begin constructing them in the primary grades. Each bar extends from the vertical (price) axis out over the horizontal (quantity) axis to the appropriate quantity on the demand (or supply) schedule (Figure 2). Many audiences (junior high school and high school students and teachers) with whom I have worked are able to interpret supply and demand graphs depicted as bar graphs in the same space (both graphs together) virtually on sight. They can spot the market clearing price (equilibrium price), where one demand bar is of equal length to a supply bar (Figure 3). They often can quickly grasp the notion of shortages or surpluses that will exist at prices other than the equilibrium price because they can see that one bar is longer than the other at that price.

When students construct their own demand graphs from schedules, have them begin by doing so with bar graphs. Later, point out that we can as easily use *just the end points* of the bar graph. Students then practice constructing demand graphs both ways, as bars and as end points. Still later, the dots of the end points are connected to become the traditional demand (or supply) graph. By constantly reminding students to keep the bar graph image in mind, they have a familiar touchstone if they ever get confused. It works for me!

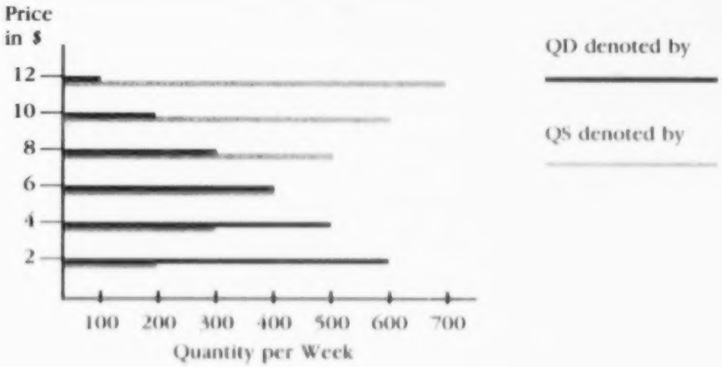
A second general principle is the importance of making economics belong to the real world. A specific technique is the use of simulations, in this case "The Big Apple."[17] My experience is that many economics students believe that much of what they study is academic theory that exists primarily in textbooks, not in the real world. For instance, the intersection of supply and demand curves produces a nice market clearing price on the blackboard, but the students tend to view it as an academic exercise, because

Figure 2
Demand Schedule As Bar Graph



P	QD	QS
2	600	200
4	500	300
6	400	400
8	300	500
10	200	600
12	100	700

Figure 3
Demand and Supply Schedules as Bar Graphs



the curves are not directly observable to them in the real world. Hence the curves are not "real."

But, of course, economists know the curves are real. The "Big Apple" can prove it to the students. In this exciting simulation students buy and sell apples. The teacher records the transaction price for each exchange. Soon the preponderance of transactions begins to pile up around a very narrow range of prices. The longer the game proceeds, the more the transactions concentrate about a single price. The students are shown the data and asked to account for this result. Eventually the teacher reveals a graph that displays the implicit supply and demand curves that are built into the activity. W,ithout fail, the intersection of the supply and demand graphs is at the price where most of the transactions took place. In this way students see how unobserved supply and demand curves produce real and observable results.

Finally, I have had some success with using flow diagrams to illustrate countervailing economic forces. This has been especially true in teaching about macroeconomic policy where a particular policy may produce causal chains resulting in conflicting results or where there is a conflict in economic theory.

Here is a greatly simplified example for purposes of illustration. Expansion of the money supply may (begin one chain of reasoning) reduce interest rates which will stimulate investment spending by businesses on plant and equipment. It will promote greater consumer spending on items where interest rates are an important consideration, such as automobiles. These effects will also promote greater employment. In other words, the policy promotes an economic expansion. Each of these events is depicted on a diagram with arrows showing the flow of causality. Students help to develop another reasoning chain that also begins with expansion of the money supply. But this monetary expansion produces inflation. Inflation drives up interest rates, resulting in the opposite of all of the results just described. However, (another chain leading from inflation) producers and consumers, wise to the workings of the economic world, expect the inflation increase to occur as soon as the monetary expansion policy becomes evident. They know that this means greater inflation in the future, so they rush out to buy now before price and interest rates rise even further.

The point is that students can use the conflicting chains to isolate disagreements in economic theory, to develop hypotheses to test, and to compare countervailing forces. Flow diagrams make it clear that sometimes the size and strength of reactions (how "heavy" the arrows) may determine the outcome as one reaction swamps a reaction in the opposite direction. This example represents an application of both Kourilsky's "two symbol" approach and Armento's focus on the unique problems in teaching relational concepts.

These three techniques and the more general principles they represent should make a useful addition to the "tool kits" of economics teachers when they are presenting specific economics content. Combined with an instructional model that centers on teaching students to solve problems and careful attention to learning theory, effective strategies can greatly enhance instruction and student learning.

Current Instructional Practices

This section presents a picture of what teachers are doing. For purposes of analysis instruction in economics can be divided into two parts: what teachers teach and how they teach it. There is some direct research evidence on the first, but almost nothing on the second. However, there are other indicators from the research that help inform us about instructional practices. For instance, knowing something about what teachers say are the purposes of economic education may lead to some inferences about both what is taught and how. Because most of the evidence is about secondary teachers, this section concentrates on practices in junior and senior high school.

The analysis begins by examining whether teachers are focusing instruction on using economics to reach reasoned conclusions about social problems; that is, on economic education for citizenship. Here the evidence is somewhat contradictory. Teachers seem to believe that problem solving and decision making should be central. The Yankelovich, Skelly and White survey asked secondary teachers what they thought were the major goals of economics instruction. Ninety percent responded that preparing "students to make intelligent decisions" is a "very important" goal. The second most frequent response was helping students "to understand the current problems facing the country" (66%).[18] Furthermore, when asked about what "aspects of economics" they were teaching, 63% of the respondents specifically mentioned "decision making" and 75% mentioned current economic issues.[19]

However, this evidence is far from conclusive. Teachers might not know how to implement instruction about decision making, even though they regard it as an important goal. What they actually focus on in class might be the learning of content despite what they say they are or should be doing. They may regard the learning of content as more important to economic decision making than the learning of the economic reasoning process. Moreover, while 90% said making decisions was a very important goal, only two-thirds mentioned that they taught decision making explicitly. There is no evidence from the survey on the emphasis on decision making by these teachers. One wonders what sort of decision making they are teaching when only one-third include teaching about opportunity cost and only one-quarter say that they teach about tradeoffs, two essential elements in economic reasoning.[20]

That so many include teaching about economic issues is not decisive either. It is crucial to consider *how* teachers are presenting these issues. If students are not carefully considering the issues, examining possible policy alternatives, applying concepts and data, and reaching conclusions, then the fact that some class time is devoted to economic issues is hardly evidence of emphasizing problem solving and decision making. After all, a teacher can lecture about the causes of inflation without engaging students in any active reasoning about what should be done about inflation, if anything.

The evidence from the 1977 NSF studies shows that instruction is primarily the more traditional, content-oriented variety. These studies led some social studies educators to conclude that (1) the dominant instructional pattern is teacher reliance on classroom recitation and lectures as a way to transmit information to students; and (2) the dominant instructional tool is the textbook, with nearly a majority of the classes relying on it as the sole source of information.[21] While there is little specific information on the instructional practices in economics classes as distinct from others, there is also little reason to suppose that these teachers radically alter their basic teaching approach when moving from U.S. history to economics.

Finally, to the extent that some teachers are indeed teaching decision making, it might not be about economic issues or involve the economic reasoning model discussed earlier. I strongly suspect that much of the decision making teachers referred to is in the context of "personal" economics or "consumer education." Recall that 66% of the teachers included instruction on economic issues. But 65%, virtually as many, felt that it was equally important to "teach students practical skills that they need in everyday lives, such as balancing a checkbook, using credit cards, how to shop wisely, etc." In my view, much of this is not economics at all, for instance learning to balance a checkbook. Wise shopping might involve decision making, but it might include very little about economic reasoning . While such consumer life skills might be useful, they are not what is needed for more effective citizenship.

Furthermore, 34% of those surveyed said that they "primarily stress" this "practical 'how-to' economics" in their economics instruction. This is more than twice as many as the number who claim to stress "theoretical economics . . . that is, principles, concepts, and systems," the very principles and concepts needed to analyze economic issues.[22]

That at least some areas of economic content are not taught, or at least not emphasized, is clear from the research data. As noted in the previous chapter, student test scores reflect much less knowledge of macroeconomics and international trade than of microeconomics. Indeed, the Yankelovich, Skelly and White survey shows that international economics is one of the least taught areas in the discipline and, as previously noted, that macroeconomics is one of the areas that present teachers with the most difficulty.[23] Yet these are areas of economics that are closely related to some of the most significant issues about which citizens must decide.

The sections on model economics instruction presented some suggestions on specific techniques for teaching economics content. Are teachers using such techniques in the classroom? Unfortunately, no one knows. There is very little research that examines economics instruction at that level of specificity.

However, a very tentative conclusion that such techniques are not used very much can be inferred from two indicators, assuming that social studies teachers do not alter their behavior much when switching from history class to economics (or including much economics in history). First, as previously noted, much social studies teaching is traditional, with a heavy emphasis on lecture. A few of the techniques presented earlier can be incorporated into lecture, for instance occasional use of Kourilsky's two symbol approach. However, others are not as easily congruent with what is regarded as typical in social studies classes. It is less likely that traditional social studies classes will provide much opportunity for students to review in their own words previous concept learning, as Armento suggests, or to practice responses, as Kourilsky suggests.

Second, some of the model instruction requires the use of outside materials for resources. Consistent use of the two symbol approach would certainly necessitate the use of special audiovisual materials. Armento's suggestions point to the use of study guides and other resources. The use of simulations was mentioned previously. Surely, effective teaching of economics content will draw heavily on much more than lecture and the textbook.

Unfortunately, as noted earlier, many teachers rely on the textbook as the single class resource. Evidence from the Yankelovich, Skelly and White survey provides further evidence. Only 34% of those surveyed could be classified as "heavy users" of economics "teaching aids," defined as having used five or more supplemental resources. A plurality (43%) were light users and an astonishing (at least to me) 23% were "nonusers."[24]

In sum, I conclude that most economics teachers are not teaching students to reason using economics and that content is much more the focus of economics instruction than is process. Furthermore, it seems clear that "practical" economics, including some content that is not economics at all, is stressed more heavily than basic economic principles. There are some areas of economics that are especially underemphasized, including macroeconomics and international economics. Finally, on the basis of scant evidence, I conclude (tentatively) that teachers are probably not using some of the best available techniques for teaching economics content. All of this suggests that current instructional practices are probably not effectively developing economic education for citizenship.

Summary

This chapter presents a model of economics instruction that centers on economic reasoning for effective citizenship. The model contains important implications for skill development and implies that instruction should emphasize defining, analyzing, and solving economic problems. The model is considered in the context of the infusion approach, the high school economics course, and at other grade levels. Research indicates that the model can be used at all grade levels, provided that it is taught with developmentally appropriate techniques and focuses on problems at the developmental level of the students. It is suggested that economic education for citizenship, as defined in the first chapter, emphasizes both content and process and that it falls within the social studies education tradition known as social studies as social science.

The chapter contains a number of suggestions on teaching economics content drawn from research on learning theory, especially the work of Armento and Kourilsky. It also includes teaching practices based on personal experiences. A survey of the research on current instructional practices casts doubt as to whether teachers are focusing on economic reasoning and using the best available teaching techniques. This suggests that teaching at present is not generally enhancing economic education for effective citizenship.

Notes

[1] Phillip Saunders, G.L. Bach, James Calderwood, and W. Lee Hansen, *A Framework for Teaching the Basic Concepts* (New York: Joint Council on Economic Education, 1984), 5-6.

[2] Ibid., 60.

[3] Marilyn L. Kourilsky, "Children's Learning of Economics: The Imperative and the Hurdles," in "Developing Economic Literacy," edited by Steven L. Miller *Theory into Practice* 26 (Summer 1987): 198.

[4] Beverly J. Armento, "Ideas for Teaching Economics Derived from Learning Theory," in "Developing Economic Literacy," edited by Steven L. Miller, *Theory into Practice* 26 (Summer 1987): 180-181.

[5] Marilyn L. Kourilsky, *Mini-Society: Experiencing Real-World Economics in the Elementary Classroom* (Menlo Park, CA: Addison-Wesley, 1983), 15-16.

[6] Beverly J. Armento, "Ideas for Teaching Economics Derived from Learning Theory," 181.

[7] Ibid., 181.

[8] James E. Davis, *Teaching Economics to Young Adolescents: A Research-Based Rationale*, (San Francisco: Foundation for Teaching Economics, 1987), 57.

[9] Ibid., 61.

[10] Ibid., 65-66.

[11] Most of the specific suggestions are found in Beverly J. Armento, "Ideas for Teaching Economics Derived from Learning Theory," and Marilyn L. Kourilsky, "Children's Learning of Economics: The Imperative and the Hurdles." Footnotes are given for all direct quotations. Other references for Armento and Kourilsky are from these two articles, but specific pages are not cited because my summary usually combines material from several places in their articles. Interested readers should consult the original sources for a far richer, more extensive presentation.

[12] Marilyn L. Kourilsky, "Children's Learning of Economics: The Imperative and the Hurdles," 200.

[13] Beverly J. Armento, "Ideas for Teaching Economics Derived from Learning Theory," 180.

[14] Marilyn L. Kourilsky, "Children's Learning of Economics: The Imperative and the Hurdles," 198.

[15] Marilyn Kourilsky and M.C. Wittrock, "Verbal and Imaginal Strategies in Teaching Economics," paper presented at the 1986 AERA sessions cited in Kourilsky, "Children's Learning of Economics: The Imperative and the Hurdles."

[16] Marilyn L. Kourilsky, "Children's Learning of Economics: The Imperative and the Hurdles," 201.

[17] James F. Niss, Judith Staley Brenneke, and John E. Clow, *Strategies for Teaching Economics: Basic Business and Consumer Education (Secondary)*, (New York: Joint Council on Economic Education, 1979).

[18] Yankelovich, Skelly and White, Inc. *National Survey of Economic Education 1981* (Phillips Petroleum Co., 1981), 55. The answers sum to more than 100% because respondents were allowed to offer multiple goals.

[19] Ibid., 58.

[20] Ibid., 59.

[21] James P. Shaver, O.L. Davis, and Suzanne W. Helburn, "The Status of Social Studies Education: Impressions from Three N.S.F. Studies," *Social Education* 43 (February 1979). The original NSF studies contain interesting data that led to the conclusions of Shaver, Davis, and Helburn. For example, the survey data on the frequency of use of various instructional techniques are instructive. See Iris R. Weiss, *Report of the 1977 National Survey of Science, Mathematics, and Social Studies Education* (Research Triangle Park, NC: Research Triangle Institute, 1978), 101-109.

[22] Yankelovich, Skelly and White, Inc. *National Survey of Economic Education 1981*, 55 and 53.

[23] Ibid., 59.

[24] Ibid., 76.

CHAPTER IV

Instructional Materials for Economic Literacy

Instructional materials are important in teaching most subjects, but they are even more crucial in the teaching of economics. Unlike some subjects where the teacher can be expected to have a reasonable academic background in the subject, economics is often presented by teachers with very little training in the discipline. Many, perhaps most, elementary teachers have never had a course in economics, and secondary economics teachers are frequently social studies teachers with their major training in history, political science, geography, or one of the other disciplines. Thus, they can be expected to rely more heavily on their textbooks and other materials. There is also the added burden of identifying and promoting the use of instructional aids that promote the reasoning process so crucial to effective economic education for citizenship. These considerations justify especially careful scrutiny of economics materials.

This chapter presents a general assessment of economics classroom resources, including my judgment on areas of strength and weakness, evaluative comments on some of the more important materials, and suggestions on some materials that deserve wider use. The chapter includes an examination of textbooks because, as shown in the previous chapter, textbooks dominate classroom instruction and are nearly always the major classroom resource. However, the first section discusses the assessment of materials more generally. Educators sometimes review materials themselves, but are often consumers of evaluations by others. In either case, it is important to consider what factors strengthen or weaken materials evaluations.

Assessing Materials Reviews

Reviewing economics materials is an essential, but difficult task. The lack of economics background of many teachers suggests that they may need to rely heavily on outside reviews, especially regarding the content of texts and other materials. Moreover, because of the controversial nature of economic issues, there is even more cause for caution in selection and use. The critique of traditional economic education presented in Chapter II adds to the controversy. As a guide to consumers of reviews, this section presents suggestions about how economics materials should be assessed and part of the framework used in the assessment of classroom materials presented later in this chapter. Most of this section concentrates on content, the area where educators are most likely to need guidance. However, the latter part of this section discusses other elements of a good materials review.

Regarding the evaluation of content, what should a good review include and avoid? An example might help illustrate the pitfalls and, by implication, the information that should be provided. ***Hucksters in the Classroom: A Review of Industry Propaganda in Schools***[1] is used as an example, because it illustrates some of the more important errors that reviewers of economics materials should avoid and that consumers of reviews should watch for.

First and most important, ***Hucksters*** never actually lists its evaluative criteria.[2] There are dozens of criteria of varying importance that might be applied to textbooks or any other materials. Some people might not agree with the criteria selected or the importance given to some over others. They may cite other criteria that were omitted or disagree with the analysis presented. But it remains essential to specify the ground on which any review is to be conducted. Without clearly articulated criteria, a review is certainly less valuable, since the reader is unable to gauge easily whether the comments are germane to his or her situation. Worse, the review may be biased and inconsistent, yielding incorrect conclusions based on sloppy analysis or concern with areas unrelated to assessing the materials.

For instance, the absence of clear criteria in ***Hucksters*** results in a lack of focus on assessing industry-sponsored materials, which were the object of the review. Large sections of the book are devoted to all sorts of extraneous concerns that Harty nonetheless seems to imply were significant to the evaluation of the materials.[3] Harty devotes a good bit of copy to the apparent self-interest of some of the companies or business groups in developing and providing materials; about one-third of the text in the chapter on economic education materials deals with business' motives.[4] But this cannot substitute for analysis of the materials, although in places Harty seems to think that damning the source is sufficient.[5] The point is that a review based on criteria is essential for both the reviewer and the reader if the assessment is to stay on target.

Criteria also need to be clearly defined, especially when judging bias. Bias will be discussed more completely later. For now it is enough to note that bias implies systematic distortion to promote a particular view. Thus, inaccuracy or incompleteness are necessary but not sufficient conditions for determining bias. And they are important whether bias is being charged or not. It is apparent that Harty has used these criteria, but unclear what she means by them. As a result, the two criteria are consistently confused and inconsistently applied.

In places, accurate content is criticized. Consider, for instance, the following statements about one industry booklet on solid wastes:

> The opportunity for profit in resource recovery is mentioned as the optimistic motive for change: "Recycling, which is one solution to the solid waste problem, will occur only when economic conditions justify it. . . . If there appears to be opportunity for profit, solid waste recovery will become a viable business . . ." (Harty's quotation of the booklet.) Nowhere are students informed that pollution control is already profitable for many firms, such as 3M Corporation, or that values of public health and aesthetics should be sufficient motive for action.[6]

Harty believes this passage to be biased, but on what grounds? The passage is not inaccurate. That it does not promote her preferred values cannot seriously be construed as omission of important content. It is not clear that 3M's efforts are solid waste recycling, and even if they are, it proves the booklet's point. Either way it does not demonstrate inaccuracy or incompleteness. Thus, lack of precision in defining criteria can cause analysis to be inconsistent.[7]

This is especially true in assessing whether materials or textbooks provide sufficient breadth and depth on a subject. Here reviewers and consumers of reviews must keep in mind the intended audience and purpose and the type of materials under review. Once again *Hucksters* provides excellent examples of what not to do.

Throughout Harty's analysis she points out what materials do *not* cover as alleged evidence of bias due to incompleteness. Generally, this is because she paid no attention to *a priori* standards such as those mentioned above. This means that she can give a poor evaluation to anything she chooses since it is impossible for anything to cover everything.[8]

However, in one section, ***Hucksters*** is very clear about what should be included. A "balanced economics curriculum," in addition to covering the "classical" economic system, should cover "alternatives" including "the reasons for government intervention — job creation, reduction of pollution, health care services, housing, transportation, and welfare." It should cover how "today's market differs from the classical system," including, "economic concentration, oligopolies, market entry barriers, unions, large scale entities like multinational corporations." It should include "defects and failings in today's market system," such as "occupational disease and injury, collusion and price fixing, extensive non-informative or deceptive advertising, and non-essential product differentiation." It should also treat "corporate demands of government subsidies or regulations which shield them from market competition," and "alternative forms of economic organization — such as cooperatives, federal chartering and worker ownership."[9] Harty proceeds to cite instances where materials fail to cover these topics.

This is disingenuous since these criteria are for an entire *curriculum*. No single piece of material, or film series, or textbook for that matter, is going to meet these demands. The failure of *Hucksters* to list reasonable content criteria that can be applied to *individual* resources leads to an evaluation that is essentially without value to users of industry-sponsored materials. A film from whatever source that teaches students the theory of how competitive markets work, even if excellent, would fail on these criteria as dismally as the worst propaganda — because one film cannot teach everything!

To summarize, consumers of reviews should expect clearly stated and defined criteria. The criteria should include accuracy and completeness. However, these criteria should be applied with the purpose and intended audience in mind. Supplemental materials for elementary students cannot be expected to cover as much content as textbooks for college students. The demands for thoroughness of coverage must be reasonable given the context in which the materials will be used.

A good example of a review that meets these criteria is *Final Report — Teaching Economics to Young Adolescents: Teacher Recommended Print Materials*, sponsored by the Foundation for Teaching Economics (FTE).[10] This review of twenty-seven textbooks and supplemental print materials employed several teachers and economists as reviewers as a guard against reviewer bias. It was carefully constructed using fifteen well-defined, specific criteria covering four broad categories: product characteristics, economic content, middle school focus, and pedagogy.

Several of the aspects of the FTE study are especially informative for consumers of reviews. First, the category of "middle school focus" takes into account the audience with whom the materials are to be used. A complete review considers the appropriateness of the content as well as its accuracy and completeness. As noted earlier, failure to do this can imperil the value of the review. Second, the study's "pedagogy" category represents an important set of criteria too often overlooked by reviewers. These criteria remind educators of the importance of using materials that enhance sound instructional techniques.

Third, and most significant for assessing economics materials in the context of citizenship, the FTE study emphasizes reasoning. Indeed, two of the fifteen criteria relate specifically to how well the materials promote student reasoning. The process of using economics knowledge to analyze alternatives and reach reasoned conclusions on issues is critical to economic education for effective citizenship. Thus, promoting reasoning is an especially appropriate criterion.

It is with these considerations in mind that specific reviews of materials are considered, beginning with social studies textbooks because of the prominence of the infusion approach mentioned in previous chapters. Next, textbooks at the middle school level are examined, followed by reviews of economics texts for the high school economics course and the implications of those reviews.

Economics in High School Social Studies Textbooks

This section reports and comments on the findings of previous reviews of the economics content of high school social studies textbooks, specifically texts used in sociology, world history, U.S. history, and government courses. The end of this section will suggest implications of these reviews for economic education for citizenship. Throughout these reviews, the primary criteria are completeness and accuracy of economics content, which are defined in this way: Does the subject treated in the text have important economic dimensions that are not covered? Or could the explanation of the event be significantly enhanced by including economics? If the answer to either of these questions is "yes," then the failure to include economics in the textbook explanation is a significant omission. Are there significant errors of fact or theory in the economic analysis that is included? If so, then the text is guilty of inaccuracy. The reviews cited in this section apply these criteria satisfactorily.

In general, past reviews of the economics content of social studies textbooks have been little short of scathing. Reviewers have found textbooks to be guilty of both omitting significant economics content and presenting errors of economic fact and theory.[11] However, the most recent comprehensive reviews of many of the major types of social studies textbooks are now a decade old. The Foundation for Research in Economics and Education commissioned several economists to review the economics content in sociology, world history, U.S. history, and American government textbooks. The reviewers selected several "leading" texts in each subject area for review. The 1977 reports to the Foundation were summarized by Robert S. Main.[12] Because the findings are significant, some of Main's conclusions will be summarized, even though the studies are dated (As will be shown shortly, there is little reason to believe that the substance of the conclusions has changed much). Also, Main has produced a useful synthesis of the studies by pointing out classes of errors common to the texts from the four subjects areas.

Main lists six areas in which virtually all social studies textbooks (at least those reviewed) make serious mistakes. He presents these under the general heading of "Market Processes and Government Interferences." Figure 4 lists each major area, the specific examples of each cited by Main, and a capsule summary of the objections lodged by the reviewing economists.

This summary does not include the rich details in Main's report or the even richer analysis of the originals. But it does show some important areas where textbooks make fundamental errors that teachers should be aware of and that future reviewers should look for. Some errors appear to be relatively innocuous, the misuse of the term and concept "surplus," for instance. But Main shows that the way this idea is presented reverses the causation underlying trade and expands into other more serious misconceptions.[13]

A more general problem, perhaps the reason that there are so many fundamental errors in the texts, is the lack of any explicit economic theory to form an analytical framework to use in presenting these events. As Main points out, this leads to *implicit*

Figure 4
Summary of Textbook Criticism

Category	*Specifics*	*Summary and Remarks*
Labor Markets		In general the texts do not use any market analysis to tackle issues relating to labor.
	wages and working conditions	The texts generally state that workers did not benefit from the industrial revolution and the rise of capitalism.
	lump of labor	This fallacy presumes that there is only a given amount of work to be done. Hence, innovation creates unemployment.
	minimum wage laws	The texts fail to recognize that minimum wage laws help some workers, but harm others.
	factory laws and unions	The texts erroneously credit unions for the higher wages received by all workers and do not mention reduced employment.
Surplus		Technically, a surplus is the unsold quantity at a particular price. The casual use of the term in the texts leads to sloppy analysis.
	agriculture	"Surplus" incorrectly refers to that which is left after taking what one needs. This leads to misunderstanding specialization, causes of trade, and voluntary exchange.
	imperialism	The fundamental confusion over surplus leads to a misunderstanding of trade and uncritical acceptance of notions of imperialism.
Mercantilism		The texts are not precise enough about the general concept of mercantilism, and so miss many chances to use it in other contexts.
	early mercantilism	Texts failed to point out that mercantilism restricts trade to benefit favored groups.

	tariffs in U.S. history	Texts generally fail to note the costs of restrictions on trade and treat tariffs as a political issue.
	regulatory agencies	Texts do not note the mercantilist effect of regulatory agencies.
	licensing	The texts ignore the costs of licensing in terms of less competition and higher prices.
Competition and Monopoly		The texts give too much credit to business ability to create monopolies and too little to the government.
	monopolizing	The texts ignore the evidence pointing toward the ineffectiveness of cartels and fail to note the impact of regulations in preserving anit-competitive markets.
	farming	In farming, unlike the industrial sectors, the texts uncritically favor collusion, with the help of the government.
Causes of the Great Depression		The texts cite the wrong causes and miss the right ones.
	monopoly	Business monopoly power is erroneously cited as a cause of the Great Depression.
	income distribution	This is a second "structural" problem cited in error by the texts as a cause.
	competition	Competition among farmers resulting in low farm income is erroneously cited as a cause.
Capitalism, Socialism and Laissez-Faire		Definitions fo these provided by the texts are generally unsatisfactory
	definitions	One example is the focus on ownership of the means of production as a major distinguishing characteristic.

theories used on an *ad hoc* basis. "The implicit theorizing . . . tends to be *ad hoc*. Since the authors are not constrained to make the theories lying behind their assertions consistent with one another, there are cases where authors propound inconsistent theories."[14] Main also suggests that the failure to separate the positive and normative aspects of economic issues and events is another source of difficulty.[15] It is clear that, for whatever reasons, social studies textbooks (at least those available at the end of the 1970s) are poor instructional tools for the teaching of economics.

Have textbook writers improved the quality and quantity of the economics content of textbooks since then? Unfortunately there have been no further comprehensive reviews of social studies texts in most of the major social studies subjects since those cited in 1977. However, in 1983 Stephen Rose and I published an examination of the economics treatment of the Great Depression in sixteen U.S. history textbooks and found nothing to indicate the quality of economics content had improved since the Saft review of 1977.[16]

Some of the specific analyses and conclusions of that review are instructive, because the Great Depression is the major economic event in U.S. history texts. It receives more copy than other eras where economic considerations were predominant. Also, because it has been heavily investigated by economists, there is much scholarly research and information available about the Great Depression. Thus, it serves as a good litmus test for textbooks. If a text author fails to have the economics of this event correct, it seems unlikely that he or she will have handled other topics adequately. For these reasons, the findings of this study are briefly reviewed.

The history texts reviewed include three kinds of errors. First, they fail to recognize the significance of the timing of events during the Great Depression. For example, the texts leave the impression that the stock market crashed one day and that the society was in the midst of the depression virtually the next. But it is precisely because this depression lasted so long that economists' research has focused on events that occurred as the depression unfolded.

The failure of the texts to disaggregate the depression into its parts leads to a second error. The texts label as causes many factors that have been discarded by economic research or that were, at most, either an initial cause or minor contributing cause of the recession. The former includes such hackneyed ideas as the presence of "sick" industries and the inequality of income and wealth. The latter includes the stock market crash, which played a much smaller role than textbooks tend to give it.

Not realizing that the Great Depression developed over nearly four years also leads the texts' authors to a third error: missing the real causes of why this recession became great. Economists have attributed significant causal impact to fiscal and, especially, monetary policy as the major reasons why a rather common recession was converted into the Great Depression. Recovery happened in spite of government policies. Indeed, with even neutral macroeconomic policies, the Great Depression might never have happened. It is virtually certain that if the Federal Reserve System had countered the monetary contraction caused by the bank panics, the depression would have been both far less severe and shorter lived.

This and the other reviews of social studies texts point to a single, major common error running through these texts. It is the absence of any economic theory as a means to organize factors or analyze events. Without theory, texts can present chronological descriptions that are misleading or causal analyses that are simply wrong. Common sense, *ad hoc* theorizing, and *post hoc* reasoning are inadequate substitutes for the carefully developed and empirically tested propositions that comprise economic theory.

The implications of errors in social studies textbooks are significant, especially in light of the research cited in previous chapters that shows how dependent social studies teachers are on the textbook as the major source of knowledge in the classroom. Simply put, a knowledgeable teacher is the only defense against misinformation in textbooks. Teachers must know enough economics to spot errors in the texts and present a correct explanation. They must also know about alternative sources of information and analysis, and about other instructional materials that can be used in place of the textbook.

These textbooks are not helpful in promoting economic education for citizenship. Because they present sloppy, even incorrect economic analysis, they do not provide good models for students to follow. Worse, students might learn incorrect generalizations and causal relationships that will impair their reasoning about current social issues.

Economics Textbooks for Young Adolescents

Economics is sometimes taught as a discrete course in the middle or junior high school or in the freshman year of high school.

Moreover, economics can be included as a major unit in other courses at these grade levels, for instance as one of the disciplines covered as part of an introductory survey of the social sciences or in a consumer education course. The FTE study mentioned earlier in this chapter has presented a comprehensive evaluation of the textbooks used at these grade levels.[17] The results are of interest here not only because of the information provided by the rankings of the texts, but also because of the soundness of the study design and the interesting alternative methods used to rank texts.

As noted earlier, the FTE study examined print materials (both supplemental and textbook) that were used with young adolescents, students in grades six through nine. The materials were rated on a scale of 1 to 5 (5 = "excellent") for each of fifteen criteria grouped in four categories. The data in Figure 5 below are the results for only the textbooks. The books are listed by publisher based on the rank (Rank 1) attained using the average total score given by each reviewer. The "Score 1" column shows that average score (maximum score of 75, 15 criteria times 5 per criterion). In addition each reviewer was asked to assign an overall rating to each text on a 1 to 5 scale. The average scores are denoted as "Score 2" in Table 1 and the ranking resulting from these scores is found in the "Rank 2" column.

Finally, the study used regression analysis to rank the texts after "factoring out" the effects of product characteristics. The

Figure 5

Publisher	*Date*	*Rank 1*	*Score 1*	*Rank 2*	*Score 2*	*Rank 3*
Houghton Mifflin	1986	1	63.86	5	3.6	8
New Readers Press	1986	2	63.47	1	3.93	7
EMC Corp.	1985	3	62.60	4	3.67	6
Addison-Wesley Publishing	1984	4	62.4	2	3.8	1
Coronado Publishing Co.	1982	5	60.08	3	3.8	4
Globe Book Co.	1983	6	58.79	6	3.53	5
Scribner Educational	1984	7	58.36	8	3.2	9
Harcourt, Brace, Jovanovich	1977	8	58.36	7	3.4	2
Allyn and Bacon	1985	9	55.33	9	3.07	13
Laidlaw Brothers	1984	10	53.87	11	2.93	10
D.O.K. Publishers	1982	11	49.67	10	3.07	3
Social Issues Resource Service	1983	12	40.13	12	2.2	12
J. Weston Walch	1977	13	39.54	13	2.13	11

idea was to determine whether product characteristics, such as "attractiveness," had influenced the overall evaluation score. By using the product characteristic scores as predictors of the overall score, the study determined a ranking of the texts (in fact, of all the materials reviewed) "free of the influence of product characteristics."[18] The resulting ranking is "Rank 3" in the Figure 5.

By ranking the texts in these three ways, the FTE study provides much useful information to the consumers of the review. First, note that the average score on Score 1 is 55.88 out of a possible 75. This corresponds to an average ranking of 3.73 out of 5 on each of the 15 criteria. The average overall evaluation (Score 2) is 3.26. Thus, the reviewers overall rating is considerably less than the average of the ratings they gave for the individual criteria. This tends to show that the reviewers were somewhat less pleased with the texts than their original ratings might indicate.

Second, there is little discrepancy between the first two rankings, but considerably more with the third. The study reports a Spearman Rank Order correlation of .89 between the first two ranks for *all* of the materials, but .43 for Rank 1 and Rank 3.[19] This discrepancy means that users interested in all of the criteria might be guided primarily by the rankings generated by either Score 1 or Score 2. Others might prefer the more heavily substance-based rankings produced by Score 3.

Another way to analyze the data is simply to rank the texts in order of the average ranking all three ranking scales. Figure 6 reports these results. It shows that *Our Economy: How it Works* from Addison-Wesley emerges as the top-ranked text by placing in the top four on all three rankings.

Finally, one minor deficiency in the FTE study should be mentioned. The absence of raw data on the criteria, for each of the textbooks makes it impossible for consumers of the review to construct their own rankings based on the criteria they value. The study makes clear that its criteria are based on prior research in economics teaching and learning for students of the target age group. However, that the criteria were selected in this way does not mean that all should be weighted equally. Indeed the study's last ranking is, in part, a reexamination of the data to remove the "halo effect" of the product characteristics. Thus, if one were to accept the criteria but choose to apply weights to them, one could not do so given the information in the report.

Nonetheless, the study represents an excellent model of the review process, with clear, research-based criteria and important results. It also shows that there are at least some acceptable texts

Figure 6
Textbook Ratings and Rankings

Publisher	*Average Rank*
Addison-Wesley Publishing Co.	2.33
New Readers Press	3.33
Coronado Publishing Co.	4.00
EMC Corp.	4.33
Houghton Mifflin Publishing Co.	4.67
Globe Book Co.	5.67
Harcourt, Brace, Jovanovich	5.67
Scribner Educational Publishers	8.00
D.O.K. Publishers	8.00
Allyn and Bacon	10.33
Laidlaw Brothers	10.33
Social Issues Resource Series	12.00
J. Weston Walch	12.33

available for economics courses or units in the middle school grades.

Textbooks for the Twelfth Grade Economics Course

There has been much more attention by economic educators recently to reviewing high school economics textbooks than to examining the economics content of other social studies textbooks. Among the detailed reviews are those available from the Joint Council on Economic Education through the National Economic Education Database and from the Ohio Council on Economic Education.[20] Others are the periodic reviews by the New York and Georgia Councils on Economic Education.[21] This section summarizes the findings of the New York review and uses it to indicate some important aspects of content reviews. The New York Review also is used to point out some implications for teaching economics. The findings of the Georgia Council review are presented as a comparison of the results of reviews.

The New York review has many strong points, but also a few significant deficiencies. Among the strengths are its comprehensiveness and clarity. Eleven texts suitable for the twelfth grade were evaluated on four general categories (physical characteristics, features, supplemental materials and aids, and concepts) with a number of criteria under each category (see the sample review in the Appendix). A numerical score, ranging from 0 for "lacking" to 4 for "excellent," was assigned to rate each text on every criterion. The points were summed to yield a total score and divided by the number of criteria to give an average score per criterion. In addition, a table displays how well a given text covers each of twenty-three basic concepts or concept areas generally conforming to those in *A Framework for Teaching the Basic Concepts*[22] (ranging from "stressed" to "omitted entirely") and whether that concept is correctly used and presented in an unbiased way. Major comments about the texts by the panel of three reviewers are provided. Moreover, texts were also reviewed by several economists for "technical errors and inaccuracies." The composite of the economists' reviews yielded a separate accuracy score ranging from 1 ("inaccurate") to 4 ("accurate").

The following figures present information drawn from the New York review. Figure 7 lists the title, author, publisher, and copyright date in descending order of total point ranking. The number at the left provides the key to Figure 8, which lists information about each text's rating.

Figure 8 provides some interesting and encouraging information about economics textbooks. First, the average overall rating for the texts is 3.19 on a four-point scale, a pretty good showing in my view. Second, there are few concepts omitted, presented inaccurately, or in a biased fashion. Finally, the accuracy rating (last column) is also reasonably high. However, it is interesting to note that the text that rated the highest in total points received a below average mark in accuracy from the economists who reviewed the text. Furthermore, the text marked with two concepts presented in a biased manner (text 5) received the second highest mark for accuracy.

These seeming contradictions point to both strengths and weaknesses of the New York review. It is an advantage to have many criteria and clear rankings on those criteria. The accuracy and completeness issues are covered by this review in four ways: (1) How well are the general categories of concepts covered (e.g. macroeconomics)? (2) How well are specific concepts covered? (3) How accurate is the coverage? (4) Are any concepts presented in a biased manner. Thus, it is possible for a text to receive high marks for coverage of general concept areas, but receive lower marks for the accuracy of that coverage. By providing information

Figure 7
Titles, Authors, Publishers, and Copyright Dates

1. *Economics*, George Watson, McDougal, Littel & Co., 1986.
2. *Economics: Today and Tomorrow*, Roger LeRoy Miller, Harper&Row, 1984.
3. *The Study of Economics: Principles, Concepts and Applications*, Turley Mings, Dushkin, 1987.
4. *Economics: Principles and Practices*, Gary Clayton and James Brown, Charles E. Merrill, 1983.
5. *The American Economy: Analysis, Issues, and Principles*, Roy Sampson and Ira Marienhoff, Houghton Mifflin, 1986.
6. *Understanding Economics*, Allen Smith, Random House, 1986.
7. *Invitation to Economics*, Lawrence Wolken and Janet Glocker, Scott, Foresman, 1985.
8. *The American Economic System*, Robert F. Smith, Michael Watts and Vivian Hogan, Laidlaw Bros., 1987.
9. *Economics: The Science of Cost, Benefit and Choice*, J. Holton Wilson and J.R. Clark, South-Western, 1984.
10. *Economics: Institutions and Analysis*, Gerson Antell, Amsco Publications, 1985.
11. *Essentials of Economics and Free Enterprise*, Richard M. Hodgetts and Terry L. Smart, Addison-Wesley, 1987.

Figure 8
Textbook Ratings

Book No.	*Total Points (100 Max)*	*Average Points (4 max)*	*Concepts Omitted*	*Concepts Presented Incorrectly*	*Concept Present Biased*	*Accuracy Points (4 max)*
1	90.5	3.62	1	0	0	2.7
2	88.5	3.54	0	0	0	3.2
3	88	3.52	0	0	0	3.7
4	86.5	3.46	0	0	0	3.0
5	82	3.28	1	0	2	3.3
6	78	3.12	0	0	0	2.9
7	76	3.04	0	0	0	3.0
8	72.5	2.9	1	1	1	2.4
9	72	2.88	0	0	0	2.7
10	71	2.96	0	0	0	2.9
11	69	2.76	0	1	1	2.6
Avg	79.45	3.19	.27	.18	.36	2.95

on both, the New York review makes it easier for a consumer to weigh the relative merits of textbooks.

On the other hand, the New York review format does have a few weaknesses. It might have been helpful to produce a numeric rating based on the coverage of specific concepts. The data are there to construct such a ranking, as has been done in Figure 9 below. This information is especially helpful to those concerned with depth and breadth of coverage, and perhaps somewhat less concerned with format and features. As the data show, there are five texts with a higher ranking than Watson's (text number 1; average rating — 3.23) on this measure; and the one by Mings (number 3; average rating — 3.80) is truly outstanding.

Furthermore, using this information reveals one perplexing inconsistency in the points assigned in the New York review's last category of criteria (concepts). The total points were calculated for both of these texts on this category. For example, examine the sample review at the end of the chapter. Sum the ratings for the six items under "Concepts" using 3.5 in place of "4-". The total for Mings' text is 21, while Watson's text scored 20.5 on the six criteria in this category, a difference not nearly as great as one would expect from the data in Figure 9.

Second, the way in which the accuracy rating of the texts was determined by the economists is troubling. The reviewers were to examine only a subset of the total list of specific concepts (11 of the 23 concepts) and apparently the economists reviewed only a subset of the possible subset. Moreover, the same concepts were not reviewed in each text nor was there necessarily the same number of reviews. Thus, when the sample review in the Appendix notes that there were six evaluations (second page of the sample review), this can be an evaluation of one concept by six different economists, a review of six concepts by one economist, or any other combination that sums to six, counting each review of an individual concept by each reviewer as one "evaluation." Thus, the accuracy ratings may not be very reliable indicators.

Still the evaluation provides a useful guide containing much-needed information. Among the more useful results of the transformation of the data into Figure 9 is the indication provided about the strong and weak areas in most textbooks. Recall from previous chapters that test data point to specific areas of inadequate student understanding. Some of these areas are among those least well presented according to the New York review. For instance, the last column of Figure 9 (Group avg.) reports the average score for

Figure 9
Textbook Coverage of Concepts

Textbook number	1	2	3	4	5	6
Scarcity	4.00	3.00	4.00	3.67	1.33	2.67
Opportunity cost	3.67	2.67	4.00	2.67	2.00	3.33
Productivity	2.33	2.33	3.00	2.33	4.00	3.33
Economic systems	3.33	3.33	3.67	2.67	2.67	3.67
Economic institutions	3.00	3.33	3.67	3.67	3.00	2.67
Exchange	3.00	3.67	4.00	3.67	4.00	3.33
Microeconomics	4.00	4.00	4.00	3.67	4.00	3.33
Markets	3.67	4.00	4.00	4.00	4.00	3.33
Supply and demand	4.00	4.00	4.00	4.00	4.00	3.67
Competition	3.67	4.00	3.67	4.00	4.00	3.00
Income distribution	3.33	3.00	4.00	3.67	4.00	3.33
Market failures	3.33	2.33	3.00	3.67	3.00	2.67
Role of government	4.00	3.67	3.67	3.33	4.00	4.00
Macroeconomics	3.33	3.00	4.00	3.33	3.67	3.67
GNP	4.00	4.00	4.00	4.00	3.67	3.67
Aggregate supply/ demand	1.33	3.00	4.00	3.00	3.00	3.00
Unemployment	3.33	4.00	4.00	4.00	3.00	4.00
Inflation/deflation	3.33	3.33	3.33	4.00	3.00	3.67
Monetary/fiscal policy	3.00	3.00	3.33	3.00	3.00	3.33
International concepts	2.67	3.33	4.00	4.00	3.00	4.00
Comparative advantage	2.00	2.67	4.00	3.00	3.00	3.00
Exchange rates	3.33	3.00	4.00	3.33	2.00	3.00
International growth	2.67	3.00	4.00	3.00	3.00	3.00
Average	3.23	3.29	3.80	3.46	3.23	3.33

Textbook number	7	8	9	10	11	Avg.	Group avg.
Scarcity	3.00	2.67	3.00	2.00	2.00	2.85	3.0
Opportunity cost	3.67	2.00	3.00	2.00	2.00	2.82	
Productivity	2.00	3.33	3.33	3.00	2.00	2.82	
Economic systems	2.33	3.33	3.00	2.00	2.00	2.91	
Economic institutions	3.00	3.00	3.00	3.00	4.00	3.21	
Exchange	3.00	3.33	3.00	4.00	3.00	3.45	
Microeconomics	3.00	2.67	4.00	3.00	3.00	3.52	3.5
Market	4.00	3.33	4.00	3.00	3.00	3.67	
Supply and demand	4.00	3.33	4.00	3.00	3.00	3.73	
Competition	4.00	4.00	3.67	3.00	4.00	3.73	
Income distribution	3.00	3.00	3.00	2.00	2.00	3.12	
Market failures	3.00	2.00	4.00	3.00	2.00	2.91	
Role of government	3.67	3.67	3.33	4.00	4.00	3.76	
Macroeconomics	3.00	2.67	3.67	2.00	3.00	3.21	3.2
GNP	3.00	3.00	4.00	3.00	3.00	3.58	
Aggregate supply/dem	2.00	2.33	4.00	3.00	2.00	2.79	
Unemployment	2.67	3.33	4.00	2.00	2.00	3.30	
Inflation/deflation	2.33	3.00	4.00	3.00	3.00	3.27	
Monetary/fiscal policy	3.33	2.33	3.67	3.00	2.00	3.00	
International concepts	3.00	2.33	3.00	3.00	3.00	3.21	2.9
Comparative advantage	3.00	1.00	2.33	3.00	2.00	2.64	
Exchange rates	3.00	3.00	2.00	3.00	2.00	2.82	
International growth	3.00	2.00	2.33	3.00	2.00	2.82	
Average	3.04	2.81	3.36	2.82	2.61	3.18	

depth of concept presentation for all of the concepts presented in that concept cluster (e.g., microeconomics) including all of the textbooks. Note that the lowest score, 2.9 of a possible 4.0 is obtained for the average of the ratings for the "international" concepts; the highest is "microeconomics" at 3.5. This is generally what one expects based on student test results. Somewhat surprising is the higher score for "macroeconomics" than for "basic concepts." However, "basic concepts" includes "opportunity cost" which is among the specific concepts least understood by students. Evidently, it is also among those concepts textbooks present least well. That the areas of poorest student performance correspond to the areas of weakest text presentation tends to reinforce the idea that teachers rely heavily on textbooks.

Another indicator of the connection between student test scores and textbook coverage is found by examining the average score for each concept individually. This information is presented in the next to the last column of Figure 9 (Avg.). It is also organized in order of decreasing rank in Figure 10 on the next page. Assuming that the ratings in the New York review are about right, the data serve as a guide to areas where teachers will need special help, both in teacher training and with supplemental materials. It is clear that all of the specific concepts in international economics are given comparatively little treatment.[23] While microeconomics seems to fare very well (three of the top four), market failures and income distribution appear to need some attention. The texts evidently do better with indicators in macroeconomics (inflation, deflation, GNP) than with policy concepts (monetary and fiscal policy, and aggregate supply and demand).

This evidence is especially significant when considering economic education for citizenship. Notice that in Figure 10 the concepts with below average rankings include most of those on the list with the most direct connection to policy questions. This suggests that texts are generally oriented more to content than to reasoning about issues.

The lack of attention to such basic concepts as scarcity, opportunity cost, and productivity is startling. This raises one question on which the New York review provides no help: How well do the texts pull the concepts together into an integrated and meaningful whole? Do they help students understand economic generalizations? For instance, the texts might present the basic mechanics of the market (e.g., supply and demand) without helping students to see that markets *allocate resources*, the funda-

Figure 10
Rank Order of Concepts Presentation

Concepts with higher than average rankings		*Concepts with lower than average rankings*	
Role of government	3.76	Income distribution	3.12
Competition	3.73	Monetary/fiscal policy	3.00
Supply and demand	3.73	Economic systems	2.91
Markets	3.67	Market failures	2.91
GNP	3.58	Exchange rates	2.88
Microeconomics	3.52	Scarcity	2.85
Exchange	3.45	Opportunity cost	2.82
Unemployment	3.30	International growth	2.82
Inflation/delation	3.27	Productivity	2.82
Economic institutions	3.21	Aggregate supply/demand	2.79
Macroeconomics	3.21	Comparative advantage	2.64
International concepts	3.21		

mental reason why markets are of compelling interest. If texts do less well with fundamental concepts such as scarcity and opportunity cost, it is hard to believe that the texts are providing the structure students need to grasp economics as more than a set of isolated concepts.

Finally, it is instructive to compare two reviews to see the degree of consistency. This is somewhat problematic because of the differences in criteria used. For instance, the Georgia Council review includes a rating for the appropriateness of the texts in meeting the 33 objectives in the statewide economics course, a set of criteria not relevant in New York. Also reviews do not always include the same books, nor necessarily the same editions.

Nonetheless, Figure 11 presents such a comparison. The ranks are based on the ratings for treatment of economic concepts, about which there should be comparatively little disagreement among reviewers. Column 1 lists the textbooks by author ranked in descending order in the Georgia Council review. The Georgia ranking is in the second column; New York, the third (NR means not reviewed).

Note that the results match fairly closely. Ignoring the Mings text, which was not reviewed in Georgia, the top three other texts (on this measure) in the New York review are among the top four in the Georgia review. The only discrepancies appear to be with books further down the list, and even these are less serious than they appear after adjusting ranks for the different number of books reviewed. Thus, the reviews, at least on this measure, tend to be mutually supportive. However, while inspection indicates that the rankings are similar, there is enough variation to warrant caution in accepting the results of one review if others are easily obtainable.

Figure 11
Textbook Rankings Compared

Author(s)	*Georgia Rank*	*NY Rank*
Smith	1	4
Watson	2	6
Wilson/Clark	3	3
Clayton/Brown	4	2
Wolken/Glocker	5	8
Petersen/Lewis	6	NR
Antell	7	9
Smith/Watts/Hogan	8	10
Clawson	9	NR
Olsen/Hailstones	10	NR
Junior Achievement	11	NR
Miller	12	5
Hodgetts/Smart	13	11
Sampson/Marienhoff	14	7
Abramowitz/Atkins/Rogers	15	NR
Mings	NR	1

In summary, based on the New York review, economics textbooks are generally doing a pretty good job on several measures. There are a half dozen texts available that seem to be more than adequate. The breadth of coverage is comprehensive. However, the texts have some areas of weakness in depth of coverage both in general areas, most notably in international concepts, and in specific concepts, such as comparative advantage. These weaknesses often correlate with poor test results by students on certain concepts and suggest places where teachers may need additional training and supplemental resources. The textbooks received reasonable, if somewhat lower, marks for accuracy. Furthermore, the reviewers found virtually no evidence of bias in the presentation of economic concepts. However, their standards of bias and accuracy might not be the same as those of some others, which leads to the subject to be considered next: Are economics textbooks biased?

Bias in Economics Textbooks

It might not be necessary to point out that the model of economic education for citizenship based on reasoned conclusions is inconsistent with the presence of bias in textbooks. Indeed the separation of positive and normative economics, the emphasis on scientific development and testing of economic theory, the careful application of evidence and analysis to issues, and the explicit use of admittedly subjective criteria — all of these are in some sense regarded as bulwarks against bias, ***at least in the positivist tradition of mainstream economics.***

Bias in economics textbooks is a serious threat to economic education for citizenship. The important issue of textbook bias is examined next.

If there is bias in economics textbooks, it could be any of four varieties: (1) in presentation of issues or concepts, meaning *the way* something is presented; (2) by omission of important alternative viewpoints or other material; (3) by promoting unfounded or debatable conclusions as truth or "reality;" or (4) by systematic, ideological bias that distorts the entire treatment. Obviously, the alternatives are not mutually exclusive; a text could be guilty of all four. Furthermore, while I have used the term "ideological" specifically with reference to the last kind of bias, any of the four might be considered ideological bias depending upon how one defines "ideology" and "bias." The presence of any or all of the first three may amount to ideological bias; that is, they might be evidence of ideological bias. Thus, ideological bias may manifest itself by the presence of all or some of the first three, or it may simply be present throughout the text.

It is apparent that the definitions of bias and ideology (as used in this context) are important. A dictionary definition of bias is: "preference or inclination that inhibits impartial judgment; prejudice."[24] Thus, bias is more than incompleteness or inaccuracy. It is presentation skewed toward some point of view. Prejudice may favor (or disfavor) a particular conclusion or set of conclusions.

Prejudice becomes ideological bias when there is a consistent pattern of bias that supports an identifiable ideology. In this context, an ideology is a complex of assumptions, concepts, and values that form a systematic viewpoint of economic arrangements.

To summarize the argument so far, a textbook might exhibit bias without that bias being ideological, for instance by inaccurate presentation or omission of material that displays a prejudice against organized labor. A disposition against organized labor, by itself, does not constitute an ideology. But such a predisposition might be part of an ideology. A more serious criticism is that of a pattern of ideological bias; for example, systematic bias that, without sufficient evidence, supports one kind of economic system as superior to any alternative.

As noted in Chapter I, Romanish has charged that economics textbooks are ideologically biased.[25] His argument drew a sharp retort from Walstad and Watts to which he replied.[26] Some may feel that this debate sums up the issue or even closes the argument. However, because Romanish's study remains the major attempt to indict these texts to date, his charges should be examined. I do not propose to rehash this debate; but rather, to analyze the arguments somewhat differently.

To begin with, Romanish defines bias: "... where economics education predisposes pupils to accept one set of values or doctrines in preference to another set."[27] This definition is acceptable as long as one conceives of "doctrine" as dogma or beliefs as opposed to scientific principles. His study, while not explicitly organized this way, actually contains the four charges of bias that are listed above. He gives examples of what he considers to be bias in the way material is presented, omission of other viewpoints, and presentation of erroneous conclusions. Further, he seems to argue ideological bias in the two ways noted above: (1) that the first three kinds of bias are evidence of systematic ideological bias in texts; and (2) that mainstream economics as taught in the United States is itself an ideology, hence textbooks based on positive economics are flawed by inherent ideological bias. The last argument is considered first, followed by the specific charges of bias and whether they amount to ideological bias.

It is clear that Romanish believes economics to be an ideology. In one place he seems to equate economics with capitalism. Romanish states "Since economics is not a precise science to date, its assumptions and structures should be held to constant analysis and critique. From a theoretical standpoint, the application of critical analysis in economic education will call into question the positivist assumptions of modern capitalist thought."[28] He includes a section ("The Nature of Economics") that essentially argues that economics is an ideology, because it has competing "ideologies," lacks worldwide consensus, and is not an "exact science."[29]

Plainly, economics is not capitalism. The tools of positive economics have been used often enough to attack capitalism. Moreover, much of the work that economists do revolves around examining "assumptions and structures" of both positive economics and capitalism. That there are competing economic ideologies does not make positive economics an ideology any more than scientific creationism makes biology an ideology. The rest of this argument simply says that economics, as a science, is relatively immature. Certainly, there are disputes. The point is that there is an accepted methodology for testing theory and resolving such disputes. I believe this has resulted in far more consensus than Romanish wants to concede.

Romanish claims economics is ideology in another way. He argues that economics can only be "objective" if it is equally applicable in all places and times and not influenced by values (i.e. if it is positivistic).[30] In another place he argues that positive economics is an ideology, because it supports the "existing order of things." Further, it "does not address the differences between society as it is and society as it could be."[31] So, by the first argument, if economics is not "objective" or positive, it is ideological. By the second, if economics is positivistic, it is ideological. To Romanish, everything is ideological. This is consistent with his citation of Webster that ideologies "are not disguised descriptions of the world, but rather real descriptions from a specific viewpoint. The viewpoint, while real, does not necessarily represent reality but rather is 'a' reality or one among many."[32] Thus, there is no objective reality, only a variety of realities as seen from different ideologies.

As pointed out in Chapter II, this particular argument is part of the ongoing debate between the positivists and the revisionists. There are two brief points to make. First, one must recognize that this critique is an indictment of economics, not just high school textbooks. Second, if the revisionist critique holds, it is unclear what content ought to be included in economics textbooks. How inclusive of "other realities" or "competing ideologies" must texts be to be free of bias? Are there standards that can be used to separate more legitimate realities from less legitimate ones? It remains for the revisionists to answer with a clearly articulated alternative.

As mentioned at the beginning of this section, Romanish makes another analytically distinct claim of ideological bias: that bias in the way material is presented, omission of other viewpoints, and presentation of erroneous conclusions are evidence of systematic ideological bias. Walstad and Watts have presented a rebuttal to Romanish. Interested readers can examine the original sources to form their own opinions. Thus, no further analysis of the debate is presented here. However, two other important points are made.

First, Walstad and Watts defend texts *in general* from most of Romanish's attack by pointing out that the evidence in his critique is heavily concentrated in two areas of content and on three of ten textbooks. They also argue that these two areas, lack of textbook treatment of "right-to-work laws" and textbook evasion of the "contradiction" between growth and environmental preservation, are not particularly good test areas for bias, at least as Romanish construes them. Setting those two areas aside, four of the ten texts escape without a single critical comment and three others have only five evidential claims lodged among them.[33] This is hardly evidence of widespread bias (on Romanish's terms) especially since there is no evidence that Romanish acquired the major texts in use at the time of the study. Furthermore, two of the ten were not even high school economics textbooks.[34]

Second, the New York review cited in the previous section found little support for charges of bias (according to the reviewers' criteria). Furthermore, these texts pass the New York review with flying colors in some of the specific content areas examined by Romanish, for example treatment of the role of government and of economic systems. The sample of textbooks in the New York review is different from the books in Romanish's review, and the texts are more recent. Maybe other texts would have been found to be biased, or the publishers have solved the problem since Romanish's review, or perhaps the reviewers in New York are simply wrong.

If one denies the positivistic foundations of economics, all widely-used economics texts in the United States appear to be inherently biased. However, this is not the mainstream position in economic education in the United States. In Romanish's rebuttal to his mainstream critics, he asks:

> Is it the position of these professors that the texts are not biased? Or, are they holding open the option that a more thorough analysis than mine (or

> one more intelligently constructed in their view) would yield a more convincing case? Is it the findings that are most upsetting, or a preference for a particular methodology and format? Is it the message or the messenger that's really at issue for them?"[55]

Walstad and Watts offer this reply:

> There are well known reasons for expressing concern about bias in free enterprise and economic education programs. . . . [I]t behooves academic observers from the fields of economics and education to keep a weather eye on all materials widely used in the nation's schools, especially the ever present textbook.[56]

Other Materials

There has been a welcome increase in supplemental materials in economics available in the last decade. Among these are the *Master Curriculum Guide Series*, at present nine volumes of lesson materials for teachers from the Joint Council on Economic Education; several video series including *Trade-offs*, *Give & Take*, *Tax Whys*, *Free to Choose*, *The People on Market Street*, the two *Mocha* films, and the three films starring the famous "Chicken," among others; microcomputer software such as "Jeans Factory", *Income/Outcomes*, and "Marketplace;" standardized tests including the *Test of Economic Literacy*, and the *Basic Economics Test*; simulations like "The Stock Market Game," "OPEST," "The Big Apple," and more.[57] Additional materials have recently been released, for example the *Economics USA* video series and *Economics and National Security: Supplemental Lessons for the High School Course*. Moreover, new materials are on the way: a new junior high school test, the *Test of Economic Knowledge*; a primary grades video series from the JCEE; and a volume of lesson strategies for the high school advanced placement economics course. And, of course, there are many more materials, especially teacher's guides, available from regional centers for economic education, the Foundation for Teaching Economics, state departments of education, businesses, the Federal Reserve System, Junior Achievement, and others. The richness, variety, and overall quality of these supplemental materials represents a giant stride forward for economic education.

As shown in the bibliography of materials presented at the end of the book, there is no way to deal comprehensively with a review and evaluation of these materials without writing a separate book devoted to that purpose. Interested consumers may access information on many of these materials through the previously mentioned "National Economic Education Database" computer link.[38] This section will offer comments on the strengths and weaknesses of a few of the most important supplemental materials, and point toward some relatively obscure materials that seem to be underutilized.

The *Trade-Offs (TO)* video series is considered first, because after a decade it remains an outstanding model for future video materials in economic education. Each of the fifteen programs carefully develops only a few concepts, thus avoiding the problem of cramming too much content into too little available time. Focusing on concepts also allows teachers flexibility in choosing to use some of the programs while skipping others. Each provides an open-ended point of departure for additional learning activities. The programs are usually engaging and humorous, and nearly all of the segments emphasize decision making in terms of the model described in Chapter III. Finally, the series has good internal sequencing based on a logical unfolding of basic concepts and some fundamentals of microeconomics. The series has deservedly been highly praised and widely used.

There are a number of small criticisms that can be raised about *TO*, as one might expect given a series that covers as much ground for such a young audience as this one does (roughly, grades 4-8). Many such criticisms are technical and minor. However, there are two significant flaws.

First, the strength of *TO*'s focus on concepts also creates an inherent weakness. As noted earlier in the chapter on curriculum, emphasizing discrete concepts leaves to the teacher the burden for tying the conceptual pieces into larger, meaningful blocks, a burden too many are ill-equipped to handle. However, given the structure of most curricula in schools and the ease with which teachers can dip in and out of the series, one can hardly fault the series designers for making this decision.

Second, the lone attempt in this series to broaden beyond a concept focus did not fare well. Program #13 is a disaster, and that is especially unfortunate given its role in the series. Program #13 is the last of four programs that describe the market basics: demand (#10), supply (#11), market clearing price (#12), and the price system (#13). Thus, program #13 carries the significant load of showing how markets allocate resources, the major point of examining the specifics of the market mechanism in the first place. This is the only program that attempts to do more than convey one or a few concepts; it tries to communicate an especially important generalization. However, the production values of this segment are not up to the level of the rest of the series.

Give & Take can be thought of as the offspring series to *TO* for the secondary level (It is advertised for use in grades 8-10, but can clearly be used in grades 11 and 12 as well). *G&T* also is generally a fine series, but of somewhat more uneven quality. Like *TO*, the twelve programs in *G&T* each focus on specific concepts and many segments use the familiar decision-making model.

The major criticism (beyond the same arguments about the concept focus) regards the initial orientation of the series as "personal" or "consumer economics." While economic education shares much with consumer education, the two are plainly not identical. They are rather like two overlapping circles in a Venn diagram. Most of the series concentrates on areas of intersection, but two of the early programs are of more interest to consumer educators than to economic educators.

Two programs are especially noteworthy: #5 and #12. Not only are these programs uncommonly well acted and written, but they also treat significant areas of economics that are not covered explicitly in other video products for pre-college classes. By dealing with derived demand, #5 begins to show students the relationship of one market with another. Program #12 is one of the few video programs that introduces students to a market structure other than perfect competition.

As mentioned above, there are many other series and individual films or tape programs, so many that they cannot all be examined here. However, before moving on to print materials, two films that are particularly noteworthy should be mentioned. The third film in Milton Friedman's *Free to Choose* series is one that U.S. history teachers should know about. It is the only film of which I am aware that presents the importance of Federal Reserve policy during the Great Depression. Other programs in this series might be of interest to high school economics teachers, but with several caveats. First, this series was not designed as an instructional classroom tool. It was presented to the general public over PBS as the video summary of the book by the same name. Second, Friedman liberally mixes positive economics with his particular political philosophy. This raises the need for some balance. Third, some teachers probably do not know that nine of the ten programs in the series have an accompanying half-hour film of Friedman discussing the first half-hour program with a group of allies and critics. In some instances the discussion film is as instructive as the first half-hour, and may provide some of the necessary balance.

Another favorite program of mine comes from Walt Disney's *People on Market Street* series of seven films. "Wages and Production" contains an excellent example of the use of marginalism, an important but often overlooked economic concept. Like most video materials, this program cannot carry the whole burden of teaching that concept alone. But the able teacher should be able to successfully exploit the presentation.

The best, most comprehensive collection of teacher's guides comes from the Joint Council on Economic Education. As mentioned earlier, the *Master Curriculum Guide Series* alone includes nine volumes of lesson materials. Because this series is so important, a few explanatory and evaluative comments are necessary.

One major advantage of these materials is that most have undergone extensive review and field testing by classroom teachers. Lessons that do not work well have been adjusted or deleted. In addition, the series covers most grade levels and many subject areas. Three volumes were designed to be used at specific grade levels — primary, intermediate, and junior high school. The other volumes are for the secondary grades (mainly, but not exclusively, high school) and can be used to infuse economics into specific subjects. The economics content has been carefully reviewed to maintain strict accuracy. All the materials teachers need to conduct the lessons are provided, except for some photocopies. There is no need to use the library to secure a film in order to make the lesson work. Finally, the lessons used represent a wide range of strategies. Most volumes contain simulations, games, and case studies and call for students to work together in a variety of different grouping arrangements.

In contrast to these significant strengths, the weaknesses are few and relatively unimportant. Because the series was produced (indeed continues to be produced) for over a decade, there is an evident evolution in the format of the individual volumes. The later volumes are specifically tied to the *Framework* document, and have a fairly standard format. The volumes for the primary and intermediate grades were produced earlier and are unlike each other or the later volumes. This makes it a little more difficult for users to select appropriate lessons if their curriculum is tied to the concept approach of the *Framework*. In fact, the volume for the primary grades is explicitly organized around generalizations, an organization that I favor, but one that is inconsistent with the rest of the series and with most economics curricula.

Perhaps the greatest problem is that the series was produced without a model curriculum as its base. The *Framework* is an excellent guide, but is not an effective substitute for a scope and sequence document. Thus, it is not surprising that when one examines the series as a whole, there are some missed opportunities. For instance, the typical expanding horizons elementary social studies curriculum suggests that the intermediate grades document should have included some lessons with explicit connection to U.S. history and world studies, subjects that are often standard in the intermediate grades. The forthcoming national model curriculum from the JCEE could lead to a redesign of the volumes in the series to tie them to the new document.

Some other quality print materials specifically for young adolescents (roughly the middle school grades) were identified in the Foundation for Teaching Economics (FTE) study mentioned earlier in this chapter. Thirteen textbooks and fourteen pieces of supplemental print material were ranked by a panel of teachers on fifteen criteria. The top six print supplements as determined by this evaluation are listed below:[39]

1. *Economics for Kids: Ideas for Teaching in the Elementary Grades*
2. *Teaching About the Consumer in the Global Marketplace*
3. *Strategies for Teaching Economics: Part II—Junior High School*
4. *Economics Today*
5. *Money, Banking and the Federal Reserve*
6. *In the Marketplace: A Basic Unit*

There are many other print materials available, too many to discuss here. However, there are two sources that are not as well known as they should be. One is the National Depository of Economic Education Awards (NDEEA). Each year in a national competition hundreds of teacher-developed economics projects are submitted for judging. The winners are described in a volume and copies of the projects can be obtained on request from the depository. Here is a source of many excellent teaching ideas that is truly low cost and easily accessible. Other information on specific teaching strategies is available from the previously mentioned National Economic Education Database. Accessed by microcomputer, one can search for instructional strategies by specifying grade level and economic concept to be taught.

There are many other materials: software, simulations, student workbooks, overhead transparencies, filmstrips, multimedia kits, and so on. The range and variety is truly impressive; the general quality is good and improving. The *National Survey of Economic Education 1981* concluded that teachers "... have some very definite needs...." for teaching materials.[40] I suggest that were the survey conducted today, many fewer teachers would express such a need. There may still be specific areas of weakness. But the larger need today seems to me to be helping teachers use what is available to promote citizenship by effectively using economics to reason about issues.

Summary

This chapter suggests what educators should look for in evaluations of materials. *Hucksters in the Classroom* is used as an example of what not to do. The importance of explicit criteria and definitions of those criteria is discussed, especially in the context of claims about inaccuracy and bias. It is noted that in the absence of clearly defined criteria, materials reviews are almost valueless to the consumer. The FTE-sponsored study of print materials for use with adolescent students is cited as a model review with clear criteria.

Another section examines the economics content of social studies textbooks. A summary of several reviews is presented that shows significant problems in texts' presentation of economics. While the comprehensive reviews on which the summary is based are dated, a somewhat later review casts doubt on whether texts have improved significantly. Generally, the texts seem to lack a consistent theoretical economics base which results in shifting assumptions and *ad hoc* theorizing. Furthermore, the texts seem to contain some outright errors. The pessimistic implications for economic education for citizenship are noted.

Three reviews of economics textbooks are examined, one focusing on texts for roughly grades 6-9 and two for the twelfth-grade high school course. These examinations reveal that there are some texts of high quality available. Weaknesses in content presentation in the texts correlate with areas of weakness in student test results, suggesting a possible cause and effect relationship. In addition, the areas of weakness do not bode well for helping students to examine policy issues, a key aspect of economic education for citizenship.

The text seems to be accurate and unbiased, according to a review published by the New York Council on Economic Education. This assessment contrasts sharply with charges by Romanish, whose position is examined in some depth because of the seriousness of the charges and the implications of his arguments for the debate between the positivists and the revisionists. It is argued that Romanish's revisionist critique of textbooks is really an indictment of the academic discipline of economics.

Finally, a brief section on other materials assesses the strengths and weaknesses of some of the major video series and teacher's guides, and mentions some materials and teaching strategies that deserve to be used more frequently.

Notes

[1] Sheila Harty, *Hucksters in the Classroom: A Review of Industry Propaganda in the Schools* (Washington, D.C., Center for Study of Responsive Law, 1979).

[2] *Hucksters* includes an evaluation checklist "for evaluating industry-sponsored educational materials" from the National Association for Industry-Education Cooperation in Appendix R (p. 177) and seems to endorse the use of the checklist (p. 7), but there is no indication that Harty used this or any other list of criteria in her review.

[3] An example is found on page 22 of *Hucksters*. It is irrelevant (and a *non sequitur* in the context presented) to the evaluation of materials on nutrition from cereal makers that three of the cereal producers were charged with anti-competitive practices.

[4] Ibid., 76-77; 80-83; 85. These pages contain examples of arguments irrelevant to the evaluation of specific materials in the economics education chapter of the book alone. Similar examples are easily found in the chapters on the other three areas of materials reviewed (nutrition, energy, and environment).

[5] See the treatment of the Troy City Schools on pages 78-79. Harty also includes reproductions of the covers of some materials without evaluating the materials at all (see pages 81 and 87), seeming to imply some guilt by the association to nearby text.

[6] Ibid., 68.

[7] Harty provides many other examples of the inconsistent application of criteria. She criticizes McDonald's labeling of their educational materials with the golden arches as product advertising (Ibid., 18). Elsewhere she criticizes materials for not being clearly labeled as produced by an industry group or business (Ibid., 8). Should the corporate source be clearly noted or not? Her criterion is unclear.

[8] Examples of this include: not stating how much water a company uses to refine iron ore; that "discoveries from deep drilling are often much more prolific could mean that unit costs of drilling are less, not more, expensive;" that bag houses are used more often than electrostatic precipitators; that implementation of pollution control is more expensive than research; and so on (Ibid., 66, 49, 66, 66, respectively). In each of the instances cited, and many others, the materials probably could not reasonably be expected to cover the areas Harty contends were omitted, either because they were beyond the scope of the topic at hand, or dealt with relatively minor aspects of the subject being covered.

[9] Ibid., 77.

[10] James E. Davis and Mark Schug, *Final Report — Teaching Economics to Young Adolescents: Teacher Recommended Print Materials* (San Francisco: Foundation for Teaching Economics, 1987).

[11] See the following reviews: American Economic Association, "Economics in the Schools: A Report by a Special Textbook Committee on Economic Education," *American Economic Review* 52 (March 1963): Part 2 Supplement; Albert Alexander, "Does the American History Textbook Still Wear a Gray Flannel Cover?" *Social Education* 33 (March 1963); James O'Neill, *Economics in Social Studies Textbooks: An Evaluation of the Economics and the Teaching Strategies in 11th and 12th U.S. and World History Textbooks* (New York: Joint Council on Economic Education, 1973); Lester Saft, "A Review of High School U.S. History Textbooks," unpublished report to the Foundation for Research in Economics and Education, 1977; Robert S. Main, "Economic MIS-education," *California School Boards* (July/August 1979); Steven L. Miller and Stephen A. Rose, "The Great Depression: A Textbook Case of Problems with American History Textbooks," *Theory and Research in Social Education* 11 (Spring 1983).

[12] Robert S. Main, "Economics in Social Studies Texts," in *National Conference on Economic Education and the Future of Capitalism: Proceedings* (Washington, D.C.: National Association of Manufacturers, 1977), 10-9. Main gives the procedure for identifying the "leading" texts and lists those that were reviewed. Four U.S. history texts were reviewed; three sociology; four government; and six world history. He summarizes the following studies: Saft, "A Review of High School U.S. History Textbooks;" C.W. Baird, "Economics in World History Texts;" G.J. Santoni, "Sociology and Economics;" and C.C. Stone, "Issues in Search of Analysis: A Critique of American Government Textbooks." All were studies prepared under the grant mentioned.

[13] Robert S. Main, "Economics in Social Studies Texts," 13-14.

[14] Ibid., 11.

[15] Ibid., 11.

[16] Steven L. Miller and Stephen A. Rose, "The Great Depression: A Textbook Case of Problems with American History Textbooks," and Lester Saft, "A Review of High School U.S. History Textbooks."

[17] James E. Davis and Mark Schug, *Final Report — Teaching Economics to Young Adolescents: Teacher Recommended Print Materials*.

[18] Ibid., 16.

[19] Ibid., 13 and 16.

[20] The National Economic Education Database is still being fully implemented at this writing. Eventually consumers will be able to access reviews of individual lessons, teacher's print materials, audio-visual materials, simulations, and textbooks via microcomputer. At present, reviews of economics textbooks have been completed. A capsule summary of those reviews is available to those unable to access the system in *Curriculum Review* 26 (Nov./Dec.1986): 24-28. The Ohio Council has produced reviews of both economics and consumer economics (education) texts. These are available from the Ohio Council on Economic Education, 112 Mount Hall, The Ohio State University, Columbus, OH, 43210.

[21] "Evaluation of Frequently Used Textbooks for the Twelfth Grade Economics Course," April 1987, available from the New York Council on Economic Education, Russell Sage College, Troy, NY, 12180. The review also contains publisher-provided information, but not a review, of two other books. It includes a table of features of eleven other texts for one semester college courses that might be appropriate for "above average to superior" high school students, which were not reviewed. Another valuable review is "1986 Critique of High School Economics Textbooks," Georgia Council on Economic Education, 1986.

[22] Phillip Saunders, G.L. Bach, James D. Calderwood, and W. Lee Hansen, *A Framework for Teaching the Basic Concepts* (New York: Joint Council on Economic Education, 1984), 11. The concepts used in the New York review do not fit the *Framework* exactly. General categories, such as microeconomics and macroeconomics were added and individual concepts were combined in a few cases (e.g. monetary and fiscal policy). However, in general the categories are nearly the same.

[23] This presents another oddity about the data in the New York review. The average rating for the general area of "international" concepts for all textbooks (3.21) exceeds the average for the specific concepts combined (2.9). Indeed the former is greater than the average rating for any of the specific concepts included under international. Evidently the reviewers perceived the whole to be greater than the sum of its parts.

[24] *The American Heritage Dictionary*, (Boston: Houghton Mifflin Co., 1976).

[25] Bruce A. Romanish, "Modern Secondary Economics Textbooks and Ideological Bias," *Theory and Research in Social Education* 11 (Spring 1983): 1-24.

[26] William B. Walstad and Michael W. Watts, "A Response to Romanish: Ideological Bias in Secondary Economics Textbooks," *Theory and Research in Social Education* 11 (Winter 1984): 25-35; and Bruce A. Romanish, "A Brief Response to Watts and Walstad," *Theory and Research in Social Education* 12 (Spring 1984): 49-51.

[27] Bruce A. Romanish, "Modern Secondary Economics Textbooks and Ideological Bias," 5.

[28] Ibid., 3.

[29] Ibid., 4-5.

[30] Ibid., 5.

[31] Ibid., 3.

[32] Ibid., 5. Romanish cites Angela Webster, "Ideology and 'A' Level Economics Textbooks," *Economics* 14 (Fall 1978): 85.

[33] William B. Walstad and Michael W. Watts, "A Response to Romanish: Ideological Bias in Secondary Economics Textbooks," 28.

[34] Ibid., 29.

[35] Bruce A. Romanish, "A Brief Response to Watts and Walstad," 50.

[36] William B. Walstad and Michael W. Watts, "A Response to Romanish: Ideological Bias in Secondary Economics Textbooks," 34.

[37] The citations for all of the materials listed here and throughout this section can be found in the Bibliography of Teaching Materials and ERIC Resources, in the last section of this book.

[38] See footnote 17.

[39] James E. Davis and Mark Schug, *Final Report — Teaching Economics to Young Adolescents: Teacher Recommended Print Materials*, 12. The complete reference for the materials cited are listed in the Bibliography of Teaching Materials and ERIC Resources, in the last section of this book.

[40] Yankelovich, Skelly and White, Inc. *National Survey of Economic Education 1981* (Phillips Petroleum Co., 1981), 85.

Teaching Materials and ERIC Resources

This listing of educational resources in economics is extensive, but not exhaustive. There is something for just about every teacher on a wide variety of concepts and subjects. However, a few disclaimers should be noted. *First*, the bibliography is not meant to be exhaustive. There are many other individual lessons and even fully-developed teacher's guides available from a variety of sources, for instance from individual centers for economic education, school districts, and state departments of education. The absence of any one of these from this list in no way represents a negative evaluation. Second, inclusion does not necessarily represent a positive evaluation. Rather, the materials listed here are some of those that are widely used, or readily available, or of some historical significance. Not every item is still "in print." However, many are in the resource libraries of schools or centers for economic education. Some that are out of print contain valuable classroom ideas. In addition, not all of the items include a copyright or publication date, because this information is not readily available in some cases.

The materials are organized into eight sections. The first, "Teacher's Guides," contains print materials that are for teachers to use in preparing lessons or using other materials. In most instances these items also include student handouts or other materials. "Student Materials" contains items that are predominantly for use by students, with relatively little or nothing included for the teacher. "Video/Films" presents video and film materials regardless of format — film, videotape, or filmstrip. The fourth section, "Textbooks," contains texts used in middle and senior high school economics courses. Microcomputer and simulation activities are combined in a separate section. "Bibliographies and Periodicals" is self-explanatory. The seventh section, "Other Materials," includes materials that do not fit neatly into any of the other categories. Tests are in this section as are some multi-media kits that have audiovisual, teacher, and student materials. Finally, the eighth section includes selected journal articles.

The listings are alphabetical by authors or editors. Where no specific authors or editors are listed, or where there is an extremely long list of such persons, the item is listed by either its title (if the publishing organization also created its content) or by publishing organization (where several organizations evidently participated in the creation of the material).

The following bibliography includes items that are in the database of ERIC (Educational Resources Information Center), which is a program of the U.S. Department of Education. Items listed below that include an ED number are available in microfiche or paper copies from the ERIC Document Reproduction Service (EDRS). For information about prices, write EDRS, 3900 Wheeler Avenue, Alexandria, Virginia 22304 or use one of these telephone numbers: 1-800-277-3742; 703-823-0500. Abstracts and descriptive information on these ERIC documents are published in *Resources in Education* (RIE), a monthly publication of the U.S. Department of Education. Most ERIC documents are also available for viewing in microfiche at libraries that subscribe to the ERIC collection. Items listed below that include an EJ number are indexed and annotated in a monthly publication, *Current Index to Journals in Education* (CIJE). These journal articles are not available through EDRS; however, they can be located in the journal section of most libraries.

Teacher's Guides

Note: Quotation marks are used to denote items that are shorter than book length, such as pamphlets or booklets. Longer works are presented with the titles in italics.

"A Good Speech." Stockton, CA: Center for the Development of Economic Education, 1983.

"A Twin Purchase." Stockton, CA: Center for the Development of Economic Education, 1983.

Advocates in Brief: A Guide for Teachers. Boston, MA: WGBH, 1979.

An Educator's Guide to the Stock Market Game. New York: Security Industry Association, 1985.

"An Educator's Guide to the Three E's: Energy/Ecology/Economics." Chicago: Sears, Roebuck and Co., 1980.

Armento, Beverly C., Lucien Ellington, Jack C. Morgan, and Anthony Suglia (eds.). *Teaching About the Japanese Economy*. New York: Joint Council on Economic Education, 1986.

Backler, Alan (ed.). *Energy and Economics: Lessons and Activities for the Senior High Grades*. Indianapolis, IN: Indiana Department of Public Instruction, 1984. ED 250 188.

Banaszak, Ronald A. and Elmer U. Clawson. *Teaching Strategies: Junior High School Level*. New York: Joint Council on Economic Education, 1981. ED 212 520.

Banaszak, Ronald and James B. O'Neill. *Economics Today*. San Francisco: CA: Foundation for Teaching Economics and USA TODAY, 1986.

Barr, Saul Z. *Lifegames: Activity-Centered Learning for Early Childhood Education in Economics*. Menlo Park, CA: Addison-Wesley Publishing, 1985.

Benson, Phillip (ed.). *The Economics of Food and Fiber: Teaching the Economics of the Food and Fiber System, Elementary Level*. Little Rock, AK: Arkansas Council on Economic Education, 1986.

Bibby, John F., Leon M. Schur, and George G. Watson, Jr. *Analyzing Government Regulation: A Resource Guide*. New York: Joint Council on Economic Education, 1978.

Brenneke, Judith S. *The Big Brown Bag*. Washington, D.C.: Food Marketing Foundation, 1981.

Brenneke, Judith Staley and John C. Soper (eds.). *Making A Case for Business: Cleveland Casebook, 1985*. Cleveland, OH: Cleveland Center for Economic Education.

Brown, Mary Jo McGee. *Creative Activities in Economics for Middle School Students*. Athens, GA: Center for Economic Education, University of Georgia.

Brown, Mary Jo McGee. *Improving Comprehension and Vocabulary Development in Economics*. Athens, GA: Center for Economic Education, University of Georgia.

Center for Economic Education (University of South Florida), Hillsborough County Public Schools, and Florida Council on Economic Education. *Decisionomics*. Tampa, FL: Florida Council, 1983.

Center for Teaching International Relations. *Teaching About the Consumer in the Global Marketplace*. 1985.

"Chick-Fil-A: A Case Study for Students in the Early Grades." Atlanta, GA: Georgia State University Center for Business and Economic Education, 1983.

Chiodo, John J. and Louis Gabbard (eds.). *Economics for Elementary, Middle and High School Instruction*. Dayton, OH: Ohio Council for the Social Studies.

"Common Cents: A Guide for Teachers." Bloomington, IN: Agency for Instructional Technology, 1977.

Davison, Donald G., (Ed.). *Teaching Strategies: Primary Level*. New York: Joint Council on Economic Education, 1977.

Davison, Donald, Richard Gage, John Lewis, and Richard Shepardson. *Instructional Materials for Economic Education (Grades 4-6)*. Iowa City, IA: The University of Iowa, Iowa City, 1980.

Dawson, George and Edward C. Prehn. *Teaching Economics in American History: A Teacher's Manual for Secondary Schools*. New York: Joint Council on Economic Education, 1984. ED 243 774.

Dawson, George G. *Developing Reasoning as The Fourth R*. New York: Joint Council on Economic Education, 1982. ED 229 308.

"Economic Education in Minnesota." Minneapolis, MN: Minnesota Council on Economic Education, 1982.

Economics and Decision Making. Enterprise for Education Inc., 1983.

"Energy Adventure." Chicago: Amoco.

Evans, Gordon M. (ed.) *Alternatives to the Lecture*. Cincinnati, OH: Greater Cincinnati Center for Economic Education, 1981.

Freeman, Vera. "A Guide to Give & Take." Bloomington, IN: Agency for Instructional Technology, 1982.

Gilliard, June V. *Curriculum Materials for Teachers*. New York: Joint Council on Economic Education, 1985.

"Have You Heard?" New York: Federal Reserve Bank of New York.

"How We Live." Cleveland, OH: The American Economic Foundation Headquarters for Simplified Economics, 1976.

"Ideas and Activities for Integrating Economic Concepts into Elementary Grades." Jackson, MS: American Enterprise Center, 1983.

Instructional Materials for Economic Education. Iowa City, IA: Iowa Council on Economic Education, 1981.

"Introducing Economics." Boston, MA: Federal Reserve Bank of Boston, 1982.

Keeping Up With the Jones's Kids: A Case Study of the Little People for Students in the Middle Grades. Atlanta, GA: Georgia State University Center for Business and Economic Education, 1983.

Kourilsky, Marilyn. *Mini-Society: Experiencing Real-World Economics in the Elementary School Classrooms*. Menlo Park, CA: Addison-Wesley Publishing, 1983.

Kourilsky, Marilyn. *Teaching Strategies: Intermediate Level*. New York: Joint Council on Economic Education, 1978.

Lay, Gary A. and Donald McCurty (eds.). *Basic Teaching Units (BTU's) on Energy*. Lincoln, NE: Nebraska Energy Office.

Leamer, Lawrence, Paul A. Smith, and Lawrence W. Bloch. *Analyzing Health Care Policy*. New York: Joint Council on Economic Education, 1977.

Leavitt, Mary Jo and Harry Leavitt. "The Energy Crisis: An Introduction — Teacher's Guide." Seattle, WA: Unigraph, 1977.

Leavitt, Mary Jo and Harry Leavitt. "The Energy Crisis: An Introduction — Learning Activity Package." Seattle, WA: Unigraph, 1977.

Leonard, Kenneth, Robert Reinke, Donald Wentworth, George Whitney, and Jonathan C. Deming. *Energy Trade Offs in the Marketplace*. Seattle, WA: Washington Council on Economic Education, 1980.

Lewis, Charnelle (ed.). *The Economics of Food and Fiber: Teaching the Economics of the Food and Fiber System, Secondary Level*. Dekalb, IL: Illinois Council on Economic Education, 1986.

"Making Money in Middlevillage." New York: Federal Reserve Bank of New York, 1981.

McKeever, Barbara. "Choices," *Economic Education Software Series*. New York: Joint Council on Economic Education, 1984.

Meyers, Peter J. II, George Vredeveld, John Lewis, and Peter Harrington. *Choice: Suggested Activities to Motivate the Teaching of Elementary Economics*. Stevensville, MI: Educational Service, Inc., 1975.

Mezzaros, Bonnie M. "A Guide to Trade-offs." Bloomington, IN: Agency for Instructional Technology, 1978.

Miller, Steven L. (ed.), Judith Repke, and Terry L. Smart. *Economics and National Security: Supplemental Lessons for the High School Course*. Columbus, OH: The Mershon Center, 1987. ED number to be assigned.

"Money, Banking, and the Federal Reserve System." Minneapolis, MN: Federal Reserve Bank of Minneapolis, 1983.

Morton, John S., Stephen Buckles, Steven Miller, David M. Nelson and Edward C. Prehn. *Teaching Strategies: High School Economics Courses*. New York: Joint Council on Economic Education, 1985. ED 261 993.

Nelson, David M. (ed.). *The Economics of Energy: A Teaching Kit (Grades 7-12)*. New York: Joint Council on Economic Education, 1983.

Nelson, Phillip J. "Marketplace," *Economic Education Software Series*. New York: Joint Council on Economic Education, 1984.

Niss, James F., Judith Staley Brenneke and John Clow. *Teaching Strategies: Basic Business and Consumer Education*. New York: Joint Council on Economic Education, 1979.

Nomaguchi, Debbie K. (ed.), David M. Nelson, and Laurie Finn. *Choices Around the World*. Seattle, WA: Washington Council on Economic Education, 1984.

O'Neill, James B. *Teaching Strategies: United States History*. New York: Joint Council on Economic Education, 1980.

O'Neill, James B. *Teaching Strategies: World Studies*. New York: Joint Council on Economic Education, 1980.

O'Neill, James B. *The Market System: Does It Work?* New York: Dow Jones & Co., 1975.

Rabbior, Gary. *Income/Outcome: Improving Economic Reasoning Skills*. New York: Joint Council on Economic Education, 1986.

Reinke Robert W. (ed.). *Children in the Marketplace: Lesson Plans in Economics for Grades 3 and 4*. New York: Joint Council on Economic Education, 1986.

Reinke, Robert, McGuire Margit, and Diane W. Reinke. *Exploring the Community Marketplace: The Community Publishing Company (Grades 3-4)*. New York: Joint Council on Economic Education, 1983.

Rindsburg, Helen. *Mathematics & Everyday Economics*. Cincinnati, OH: Cincinnati Public Schools.

Ristau, Robert, H., Michael Hartoonian, Peter Senn, and Ruth Thomas. *Teaching Strategies: Consumer Economics*. New York: Joint Council on Economic Education, 1985.

Salemi, Michael K. and Sarah Leak. *Analyzing Inflation and Its Control: A Resource Guide*. New York: Joint Council on Economic Education, 1984. ED 242 618.

Saunders, Phillip, G.L. Bach, James D. Calderwood, and W. Lee Hansen. *A Framework for Teaching the Basic Concepts*. New York: Joint Council on Economic Education, 1984.

Scheer, Lorraine H., John H. George, Ruth I. Butterfield, and John S. Morton. *Analyzing Crime and Crime Control: A Resource Guide*. New York: Joint Council on Economic Education, 1981.

Schug, Mark C. (ed.). *Economics for Kids: Ideas for Teaching in the Elementary Grades*. New York: Joint Council on Economic Education and National Education Association, 1986.

Shwiff, Steven S., Jarrell W. McCracken, and Richard W. Jordan. *Simulation and Reality: An Economic Experience (a semester course -high school level)*. Boulder, CO: Colorado Council on Economic Education, 1979.

"Study of Manchester." Storrs, CT: Connecticut Joint Council on Economic Education.

Supplementary Materials for Give & Take. New York: Joint Council on Economic Education.

Swartz, Thomas R., L. John Roos, and John S. Morton. *Analyzing Tax Policy: A Resource Guide*. New York: Joint Council on Economic Education, 1979.

"Taking Stock in the Future: A Classroom Program for Grades 7-12." New York: New York Stock Exchange, 1985.

Teaching Economics in One Semester: A Curriculum Resource Package. Greensboro, NC: North Carolina Council on Economic Education.

"The Life of a Dollar Bill." New York: Federal Reserve Bank of New York, 1983.

"The Road to Roota." Boston: Federal Reserve Bank of Boston, 1981.

"The Role of Tools in the Development of the American Economy."

Storrs, CT: Connecticut Joint Council on Economic Education.

"The Story of Wheat Flakes." Stockton, CA: Center for the Development of Economic Education, 1983.

The World of Economics: Mind over Muffins. San Francisco: Federal Reserve Bank of San Francisco, 1985.

The World of Economics: Money Games. San Francisco: Federal Reserve Bank of San Francisco, 1985.

The World of Economics: The E-Team. San Francisco: Federal Reserve Bank of San Francisco, 1985.

The World of Economics: Wilde About Trade. San Francisco: Federal Reserve Bank of San Francisco, 1985.

"Too Much, Too Little: A Teacher's Guide." New York: Federal Reserve Bank of New York, 1985.

Viebrock, Connie J. and Harold E. Ohmart. "Pete's Pizzeria," *Economic Education Software Series*. New York: Joint Council on Economic Education, 1984.

Washington Council on Economic Education and Washington Department of Public Instruction. *In the Marketplace: A Basic Unit*. 1980.

Wass, Dorothy C. (ed.) *Among the Best: Five Award-Winning Projects in Economic Education for Kindergarten — Sixth Grade*. New York: Joint Council on Economic Education, 1978.

Watts, Michael (ed.). *Student Activities to Accompany the People on Market Street Film Series*. West Lafayette, IN: Purdue Research Foundation, 1983. ED 252 485.

Watts, Michael. "A Guide to Tax Whys." Washington, D.C.: Internal Revenue Service, 1985.

We're More Than Just Flowers: A Case Study of Hall's Flower Shops, Inc., for Students in the Early Grades. Atlanta, GA: Georgia State University Center for Business and Economic Education, 1982.

"Wishes and Rainbows." Boston: Federal Reserve Bank of Boston, 1981.

Wyatt, George L. and Joan O'Bannon. *Economics Education: A Guide for Teachers, Grades 9-12*. Salem, OR: Oregon Department of Education, 1984.

Wyoch, Robert B., David E. Black, Lawrence Kleinhenz, and David Wiget. *Bringing a Global Perspective to Economics*. Columbus, OH: The Mershon Center, 1983.

Student Materials

"A Christmas Present for the President." St. Louis: Federal Reserve Bank of St. Louis, 1985.

"A Day at the Fed." New York: Federal Reserve Bank of New York, 1983.

"A Primer on Inflation." New York: Federal Reserve Bank of New York, 1984.

"Basics of Foreign Trade and Exchange." New York: Federal Reserve Bank of New York, 1983.

Blake, Daniel R., Lester Saft, and Richard L. Tontz. "Prices and Markets: An Economic Primer." Northridge, CA: Center for Economic Research and Education, California State University, Northridge, 1982.

"Coins and Currency." New York: Federal Reserve Bank of New York, 1981.

"Colonial New England: The Cashless Society." Boston: Federal Reserve Bank of Boston, 1975.

"Economic Activity and Markets." St. Louis: Federal Reserve Bank of St. Louis, 1985.

Economics and Marketing: Learning Activity Packs. Columbus, OH: Interstate Distributive Education Curriculum Consortium, 1979.

"Employment and Unemployment." Minneapolis, MN: Federal Reserve Bank of Minneapolis, 1978.

"Federal Reserve Operations." Atlanta, GA: Federal Reserve Bank of Atlanta, 1980.

"Glossary of Federal Reserve Terms." Washington D.C.: Board of Governors of the Federal Reserve System, 1985.

"History at Your Fingertips/Spirit of the Nation." Boston: Federal Reserve Bank of Boston, 1980.

Hopeli, Nancy (ed.). *Great Decisions '85*. New York: Foreign Policy Association, 1985.

I Bet You Thought . . ." New York: Federal Reserve Bank of New York, 1984.

Inflation. Dayton, OH: Domestic Policy Association, 1983. ED 225 903.

Jobs & Productivity. Dayton, OH: Domestic Policy Association, 1983.

"Keeping Our Money Healthy." New York: Federal Reserve Bank of New York, 1984.

"Key to the Gold Vault." New York: Federal Reserve Bank of New York, 1981.

"Money In Colonial New England." Boston: Federal Reserve Bank of Boston, 1974.

"Money: Master or Servant?" New York: Federal Reserve Bank of New York, 1984.

"Once Upon a Dime." New York: Federal Reserve Bank of New York, 1985.

Opposing Viewpoints: Sources — America's Economy. St. Paul, MN: Greenhaven Press, Inc., 1986.

"Role of Government in U.S. Economy . . . Fiscal Policy." St. Louis: Federal Reserve Bank of St. Louis, 1985.

The Deficit and the Federal Budget. Dayton, OH: Domestic Policy Association, 1983.

"The Federal Reserve System — Purposes and Functions." Washington, D.C.: Board of Governors of the Federal Reserve System, 1984.

"The Federal Reserve System in Brief." San Francisco: Federal Reserve Bank of San Francisco, 1982.

"The Story of Banks and Thrifts." New York: Federal Reserve Bank of New York, 1985.

"The Story of Checks and Electronic Payments." New York: Federal Reserve Bank of New York, 1983.

"The Story of Consumer Credit." New York: Federal Reserve Bank of New York, 1980.

"The Story of Foreign Trade and Exchange." New York: Federal Reserve Bank of New York, 1984.

"The Story of Inflation." New York: Federal Reserve Bank of New York, 1984.

"The Story of Money." New York: Federal Reserve Bank of New York, 1984.

Tontz, Richard L. "Energy Crisis?: An Economic Analysis." Northridge, CA: Center for Economic Research and Education, California State University, Northridge, 1980.

"Ump's Fwat, An Annual Report for Young People." Richmond, VA: Figgie International, 1982.

"Who We Are and What We Do." St. Louis: Federal Reserve Bank of St. Louis, 1984.

"You and Your Money." Richmond, VA: Federal Reserve Bank of Richmond, 1981.

Videos/Films

Note: Filmstrips are indicated. All others are film, videotape, or both.

Advocates in Brief. Boston, MA: WGBH, 1980. Of the twenty programs, the following are of the most interest to economics instructors:
"Move to Break OPEC"
"Nuclear Power"
"Seabed Mining"
"Kid's TV"
"Trucking Deregulation"

  "Balanced Budget"
  "National Service"

Business in My Town: Everybody's Business. Washington, D.C.: American Institute of Cooperation, 1981. Filmstrip.

Center for Economic Education, University of Kansas. *Infrastructure: An American Crisis*? Washington D.C.: American General Contractors and Research Foundation, 1986. Filmstrip.

Chickenfeed: A Fowl Look at Money. San Diego, CA: World Research Inc., 1984.

Chickenomics: A Fowl Approach to Economics. San Diego, CA: World Research Inc., 1981.

Chickenpower: A Fowl Look at Energy Prices. San Diego, CA: World Research Inc., 1984.

Common Cents. Bloomington, IN: Agency for Instructional Technology, 1977. Ten programs:

1. "Trading"
2. "Producers and Consumers"
3. "Choices"
4. "Prices"
5. "How Money Works"
6. "Wants and Needs"
7. "Credit"
8. "Banking"
9. "Jobs"
10. "Production"

Economics by Choice. Burbank, CA: Walt Disney Education Media.

Economic Issues Series: 1980-85. San Francisco: Federal Reserve Bank of San Francisco, 1985. Eleven programs.

1. "Safeguarding Deposits"
2. "The Pacific Rim"
3. "Are We Saving Enough?"
4. "A Primer on Monetary Policy"
5. "International Borrowing"
6. "How Goes the Dollar?"
7. "Demographics of the 1980's"
8. "Oil Pricing"
9. "The Rental Housing Market"
10. "China: Nation in Transition"
11. "Money in the Economy"

Educational Film Corporation and Wharton Econometric Forecasting Associates. Economics USA. Chicago: Annenberg CPB Collection, 1985. Twenty-eight programs.

1. "Resources and Scarcity"
2. "Markets and Prices: Do They Meet Our Needs?"
3. "U.S. Economic Growth: What Is the Gross National Product?"
4. "Booms and Busts: What Causes the Business Cycle?"
5. "John Maynard Keynes: What Did We Learn from the Great Depression?"
6. "Fiscal Policy: Can We Control the Economy?"
7. "Inflation: How Did the Spiral Begin?"
8. "The Banking System: Why Must It Be Protected?"
9. "The Federal Reserve: Does Money Matter?"
10. "Stagflation: Why Couldn't We Beat It?"
11. "Productivity: Can We Get More for Less?"
12. "Federal Deficits: Can We Live with Them?"
13. "Monetary Policy: How Well Does it Work?"
14. "Stabilization Policy: Are We Still in Control?"

15. "The Firm: How Can It Keep Costs Down?"
16. "Supply and Demand: What Sets the Price?"
17. "Perfect Competition and Inelastic Demand: Can the Farmer Make a Profit?"
18. "Economic Efficiency: What Price Controls?"
19. "Monopoly: Who's in Control?"
20. "Oligopolies: Whatever Happened to Price Competition?"
21. "Pollution: How Much Is a Clean Environment Worth?"
22. "Labor and Management: How Do They Come to Terms?"
23. "Profits and Interest: What Is the Best Return?"
24. "Reducing Poverty: What Have We Done?"
25. "Economic Growth: Can We Keep Up the Pace?"
26. "Public Goods and Responsibilities: How Far Should We Go?"
27. "International Trade: For Whose Benefit?"
28. "Exchange Rates: What in the World Is a Dollar Worth?"

Famous Amos: The Business Behind the Cookie. Deerfield, IL: Simon and Schuster Communications, 1985.

Fergi Builds a Business Series. Burbank, CA: Walt Disney Education Media. Four programs.

1. "If the Fergi Fits, Wear It (or Turning T-Shirts into Profit)"
2. "Fergi Goes Inc."
3. "Fergi Meets the Challenge"
4. "Fergi Diversifies"

Friedman, Milton. *Free to Choose*. Erie, PA: Penn Communications, 1981. Ten Programs:

1. "The Power of the Market"
2. "The Tyranny of Control"
3. "Anatomy of Crisis"
4. "From Cradle to Grave"
5. "Created Equal"
6. "What's Wrong with Our Schools?"
7. "Who Protects the Consumer?"
8. "Who Protects the Worker?"
9. "How to Cure Inflation"
10. "How to Stay Free"

I Can Do It!. Washington, D.C.: National Federation of Independent Business Foundation, 1986. Three programs:

1. "Ed Lewis"
2. "Stew Leonard"
3. "Judy Wineland"

Inflation... Taxing the American Dream. New York: Federal Reserve Bank of New York, 1980. Filmstrip.

Joint Council on Economic Education and Agency for Instructional Technology. *Tax Whys*. Bloomington, IN: Agency for Instructional Technology, 1985. Six programs:

1. "Taxes Raise Revenues"
2. "Taxes Influence Behavior"
3. "Taxes Involve Conflicting Goals"
4. "Taxes Affect Different Income Groups"
5. "Taxes... Can They Be Shifted?"
6. "Taxes... What Is Fair?"

Joint Council on Economic Education, Agency for Instructional Technology, and Canadian Foundation for Economic Education. *Trade-offs*. Bloomington, IN: Agency for Instructional Technology 1978. Fifteen programs:

1. "Choice"
2. "Malcolm Decides"

   3. "We Decide"
   4. "Give and Take"
   5. "Less and More"
   6. "Working Together"
   7. "Does It Pay?"
   8. "Learning and Earning"
   9. "Why Money?"
   10. "To Buy or Not To Buy"
   11. "To Sell or Not To Sell"
   12. "At What Price?"
   13. "How Could That Happen?"
   14. "Innocent Bystanders"
   15. "Helping Out"

Joint Council on Economic Education, Agency for Instructional Technology, and Canadian Foundation for Economic Education. *Give & Take*. Bloomington, IN: Agency for Instructional Technology, 1982. Twelve programs:

   1. "You Choose: Scarcity and Personal Decision Making"
   2. "We Choose: Scarcity and Social Decision Making"
   3. "Let's Save: Opportunity Cost"
   4. "Creditwise: Opportunity Cost"
   5. "Where Do Jobs Come From?"
   6. "A Key to Productivity: Human Capital"
   7. "Private or Public? Public Goods and Services"
   8. "Changing Taxes: Public Goods and Services"
   9. "Market Prices: Supply and Demand"
   10. "Changing Market: Supply and Demand"
   11. "Take Your Choice: Substitution"
   12. "Why Competition? Market Structure"

Kingdom of Mocha. Chicago: Amoco.

Making Money Work. New York: Federal Reserve Bank of New York, 1984. Filmstrip.

Money: Summing It Up. St. Louis: Federal Reserve Bank of St. Louis, 1982.

Mrs. Peabody's Beach. Burbank, CA: Walt Disney Education Media.

Our Economy: How It Works. Westminster, MD: Random House, Inc., 1984. Filmstrips and videos. Six programs:

   1. "The Jeans Story: Added Resources, Added Value"
   2. "From Wheat to Bread: High-Tech Efficiency, High-Yield Productivity
   3. "The Story of Paper: Managing People, Managing Resources"
   4. "The Story of Petroleum: Critical Risks, Potential Profits"
   5. "Money and the Banking System: The Fed Acts, Banks React"
   6. "The Role of Government in the Economy: Fiscal Policies, Market Realities"

Return to Mocha. Chicago: Amoco, 1986.

The People on Market Street. Burbank, CA: Walt Disney Education Media, 1977. Seven programs.

   1. "Scarcity and Planning"
   2. "Cost"
   3. "Demand"
   4. "Supply"
   5. "Market Clearing Price"
   6. "Wages and Production"
   7. "Property Rights and Pollution"

The Role of Commercial Banking in the U.S. Chicago: Federal Reserve Bank of Chicago, 1976. Filmstrip.

Scrooge McDuck and Money. Burbank, CA: Walt Disney Education Media.

The World of Economics: Mind over Muffins. San Francisco: Federal Reserve Bank of San Francisco, 1985.

The World of Economics: Money Games. San Francisco: Federal Reserve Bank of San Francisco, 1985

The World of Economics: The E-Team. San Francisco: Federal Reserve Bank of San Francisco, 1985.

The World of Economics: Wilde About Trade. San Francisco: Federal Reserve Bank of San Francisco, 1985.

The World of Work. Washington, D.C.: American Iron and Steel Institute, 1983. Filmstrip.

Textbooks

Middle school and junior high school

Consumer Action: Personal Business Management. Houghton Mifflin Publishing Co., 1986.

Decisions: Making Personal Choices. EMC Corp., 1985.

Discovering Economics. D.O.K. Publishers, 1982.

Economics and the American Free Enterprise System. Globe Book Co., 1983.

Economics and the Free Enterprise System. Coronado Publishing Co., 1982.

Economics Today and Tomorrow. Scribner Educational Publishers/MacMillan, 1984.

Economics: It's Your Business. New Readers Press, 1986.

Free Enterprise in America. Harcourt, Brace, Jovanovich, 1977.

Free Enterprise: The American Economic System. Laidlaw Brothers, 1984.

Introduction to the Social Sciences. Allyn and Bacon, 1985.

Our Economy: How It Works. Addison-Wesley Publishing Co., 1984.

Understanding Our Economy. J. Weston Walch, 1977.

What Citizens Need to Know About Economics. Social Issues Resource Series, 1983.

Twelfth grade

Abramowitz, Atkins, and Rogers. *Economics and the Free Enterprise System*.

Antell, Gerson. *Economics: Institutions and Analysis*. Amsco Publications, 1985.

Clawson, Elmer. *Our Economy: How It Works*.

Clayton, Gary and James Brown. *Economics: Principles and Practices*. Charles E. Merrill, 1983.

Hodgetts, Richard M. and Terry L. Smart. *Essentials of Economics and Free Enterprise*. Addison-Wesley, 1987.

Junior Achievement. *Applied Economics*.

Miller, Roger LeRoy. *Economics: Today and Tomorrow*. Harper & Row, 1984.

Mings, Turley. *The Study of Economics: Principles, Concepts and Applications*. Dushkin, 1987.

Olsen, Hailstones. *Economics: Principles and Applications*.

Petersen, Lewis. *Free Enterprise Today*.

Sampson, Roy and Ira Marienhoff. *The American Economy: Analysis, Issues, and Principles*. Houghton Mifflin, 1986.

Smith, Allen. *Understanding Economics*. Random House, 1986.

Smith, Robert F., Michael Watts and Vivian Hogan. *The American Economic System*. Laidlaw Bros., 1987.

Watson, George. *Economics*. McDougal, Littel & Co., 1986.

Wilson, J. Holton and J.R. Clark. *Economics: The Science of Cost, Benefit and Choice*. South-Western, 1984.

Wolken, Lawrence and Janet Glocker. ***Invitation to Economics***. Scott, Foresman, 1985.

Software and Simulations

Note: This list is a mere sample since comprehensive lists are readily available. See the "Periodicals and Bibliography" section for the software catalog by Walstad, Hallows, and Ross and the guide to simulations by Wilson and Schug. Print simulations are denoted with an "S;" all others are software.

Baldicer Game. Richmond, VA: John Knox Press. S.
Coffee, the Rules of the Game and You. New York: The Christophers. S.
Economic System. Indianapolis, IN: Bobbs-Merrill Educational Publishing. S.
Escape from Fraxla. Minneapolis, MN: Federal Reserve Bank of Minneapolis, 1986.
"Game of Farming," ***Geography in an Urban Age: High School Geography Project***. New York: Macmillan Publishing Co., 1979. S.
Glazier, Ray. ***Settle or Strike: Collective Bargaining Simulation***. Cambridge, MA: Abt Associates, 1974. S.
Guns and Butter. Del Mar, CA: Simile II. S.
Import. Del Mar, CA: Simile II. S.
International Trade. Lakeside, CA: Interact. S.
International Trade: An Economics Decision Game. Cranford, NJ.: Didactic Systems, Inc. S.
Island. New York: Friendship Press. S.
Jeans Factory. Lawrence, Kansas: Center for Economic Education, University of Kansas.
Joint Council on Economic Education, Agency for Instructional Technology, and Canadian Foundation for Economic Education. ***Income/Outcome***. Bloomington, IN: Agency for Instructional Technology, 1986.
Lewis, John L. and Peter Senn. ***Energy Task Force***. New York: Joint Council on Economic Education, 1986.
McKeever, Barbara, John L. Lewis, and Peter Senn. ***Choices***. New York: Joint Council on Economic Education, 1984.
Nappi, Andrew T. ***You're the Banker***. Minneapolis, MN: Federal Reserve Bank of Minneapolis, 1977. S.
Nelson, Phillip J., John L. Lewis, and Peter Senn. ***Marketplace***. New York: Joint Council on Economic Education, 1984.
Profit: A Simulation of Modern Trading in Southeast Asia. Hanover, NH: American Universities Field Staff. S.
Reinke, Diane and Margit McGuire. ***The Book Company***. Seattle, WA: Washington Council on Economic Education, 1986.
Starpower. Del Mar, CA: Simile II. S.
Survival. Tampa, FL: Florida Council on Economic Education. S.
The Baseball Game: A Market Place Learning Activity. Richmond, VA: Figgie International, 1982. S.
The Manor Game. Bloomington, IN: History Games Co. S.
The Nomad Game. Bloomington, IN: History Games Co. S.
The Social Mobility Game. Bloomington, IN: History Games Co. S.
Triangle Trade (The Rum and Riches Game). Corvallis, OR: Simulation Systems. S.
Tightrope. El Paso, CA: El Paso Public Schools. S.

Viebrock, Connie J., Harold E. Ohmart, John L. Lewis, and Peter Senn. *Pete's Pizzeria*. New York: Joint Council on Economic Education, 1984.

Bibliographies and Periodicals

Note: Periodicals are denoted with a "P;" all others are bibliographies.

"Federal Reserve System Public Information Materials." Washington D.C.: Board of Governors of the Federal Reserve System, 1986.

Hendricks, Robert, George G. Dawson, and Minda M. Matilla. *Learning Economics Through Children's Stories*. New York: Joint Council on Economic Education, 1986.

"Instructional Materials of the Federal Reserve System." Washington, D.C., 1984.

Joint Council on Economic Education. *The Elementary Economist*. New York: Joint Council on Economic Education. P.

Joint Council on Economic Education. *The Senior Economist*. New York: Joint Council on Economic Education. P.

Lewis, Charnelle (ed.). "Elementary Economics: A Bibliography." Chicago: Federal Reserve Bank of Chicago. 1985.

Monetary Trends. St. Louis: Federal Reserve Bank of St. Louis. P.

National Economic Trends. St. Louis: Federal Reserve Bank of St. Louis. P.

Quattro, Edward. "Entrepreneurial Education Resource Guide." Cleveland, OH: Cleveland Center for Economic Education, 1986.

Selim, M.A. (ed.). "Annotated Bibliography of Teaching Materials for Global Economics." St. Paul, MN: Center for Economic Education, College of St. Paul.

Weekly Letter. San Francisco: Federal Reserve Bank of San Francisco. P.

Walstad, William, Karen S. Hallows and David Ross. *An Annotated Catalog of Microcomputer Software in Economics*. New York: Joint Council on Economic Education, 1986.

Wilson, Cathy R. and Mark C. Schug. *A Guide to Games and Simulations for Teaching Economics*. New York: Joint Council on Economic Education, 1979.

"World Energy Outlook Through 2000." Wilmington, DE.: Conoco, Inc. P.

Other Materials

Banaszak, Ronald A. (ed.). *Directory of Organizations Providing Business and Economic Education Information*. San Francisco, CA: Foundation for Teaching Economics, 1986.

Banaszak, Ronald A. and Dennis C. Brennan. *Teaching Economics: Content and Strategies*. Menlo Park, CA: Addison-Wesley Publishing Company, 1983.

Besant, Lloyd and Nancy Keefer (eds.). *Commodity Markets*. Chicago: Chicago Board of Trade, 1983. (background teacher's guide, and materials).

Besant, Lloyd and Nancy Keefer (eds.). *The Marketplace*. Chicago: Chicago Board of Trade, 1983. (background teacher's guide, and materials).

Brenneke, Judith Staley (ed.) *Consumer Education and Economic Education in the Public Schools*. New York: Joint Council on Economic Education, 1981. (teacher information).

"Century of Entrepreneurs." San Mateo, CA: National Federation of Independent Business Research and Economic Education, 1981. (poster).

Chizmar, John F. and Ronald S. Halinski. *Basic Economics Test (Grades 4-6)*. New York: Joint Council on Economic Education, 1981.

Davis, James E. (ed.) *Teaching Economics to Young Adolescents: A Research-Based Rationale*. San Francisco, CA: Foundation for Teaching Economics, 1987.

Disney's Wide World of Economics and Enterprise. Burbank, CA: Walt Disney Educational Media Co., 1978. (multimedia kit).

Ford, Lucille G., *University Economics: Guide for Education Majors*. Cleveland, OH: Martha Holden Jennings Foundation, 1979. (teacher information).

"I, Pencil." Irving-on-Hudson, NY.: Foundation for Economic Education, Inc., 1958. (brief handout).

"Keys for Business Forecasting." Richmond, VA: Federal Reserve Bank of Richmond, 1980. (teacher information).

Kourilsky, Marilyn. *Understanding Economics: Overview for Teachers, Experiences for Students*. Menlo Park, CA: Addison-Wesley Publishing, 1983. (teacher information).

Marshall, Ray and Brian Rungeling. *The Role of Unions in the American Economy*. New York: Joint Council on Economic Education, 1984. (teacher information). ED 255 434.

Miller, Steven L. "An Economic Perspective," in M. Eugene Gillion and Raymond H. Muessig (eds.). *Perspectives of Global Education*. Columbus, OH: The Ohio State University, 1981. (teacher information).

Once Upon a Dime. New York: Federal Reserve Bank of New York, 1982. (multimedia kit).

Prehn, Edward C. *Teaching High School Economics*. New York: New York Council on Economic Education, 1981. (teacher information).

Schug, Mark (ed.). *Economics in the School Curriculum, K-12*. New York: Joint Council on Economic Education and National Education Association, 1985. (teacher information).

Soper, John C. and William Walstad. *Test of Economic Literacy (Grades 11-12)*. New York: Joint Council on Economic Education, 1986.

Walstad, William and John C. Soper. *Test of Economic Knowledge (Grades 7-9)*. New York: Joint Council on Economic Education and Foundation for Teaching Economics, 1987.

Warmke, Roman F., Raymond H. Muessig, and Steven L. Miller. *The Study and Teaching of Economics*. Columbus, OH: Charles E. Merrill Publishing, 1980. (teacher information).

Weaver, Kenneth F. (ed.) *Energy: Facing up to the Problem, Getting Down to Solutions*. Washington, D.C.: National Geographic Society, 1981. (teacher information).

"What's the Difference." San Mateo, CA: National Federation of Independent Business Research and Economic Education, 1981. (poster).

Winnie the Pooh and the Value of Things. Burbank, CA: Walt Disney Educational Media Co., 1978. (multimedia kit).

Witherill, Robert D. *Economic Building Blocks: How to Teach Economics in the Elementary School*. Portland, ME.: University of Maine at Portland-Gorham, 1977. (teacher information).

Journal Articles

Ajello, Anna-Marie and others. "Teaching Economics in Primary School: The Concepts of Work and Profit." *International Journal of Behavioral Development* 10 (March 1987): 51-70. EJ 357 158.

Banaszak, Ronald A. "Economics for Junior High School Students." *Social Studies Review* 24 (Spring 1985): 49-55. EJ 316 065.

Beckman, Steven "A Microcomputer Program that Simulates the Baumol-Tobin Transactions Demand for Money." *Journal of Economic Education* 18 (Summer 1987): 309-17. EJ 358 583.

Brenneke, Judith-Staley "Ways to Integrate Economics into Business Education Courses." *Journal of Business Education* 58 (February 1983): 169-72. EJ 277 536.

Chizmar, John F.; Halinski, Ronald S. "Performance in the Basic Economics Test" (BET) and "Trade-Offs." *Journal of Economic Education* 14 (Winter 1983): 18-29. EJ 275 290.

DeBrock, Larry M. "Selected Current Data Sources." *Journal of Economic Education* 18 (Summer 1987): 345-350. EJ 358 586.

Deery, Ruth "Classroom Routines: Make Them Pay Off Big!" *Social Education* 48 (February 1984): 138-41. EJ 294 079.

Fels, Rendigs "Fundamental Economic Concepts—Another Perspective: A Comment." *Journal of Economic Education* 18 (Spring 1987): 121-26. EJ 356 143.

Hansen, Lee W. "Annual Report of the Committee on Economic Education of the American Economic Association." *Journal of Economic Education* 18 (Spring 1987): 260-62. EJ 356 161.

Hansen, Lee W. "The Scope of Microeconomics: A Comment." *Journal of Economic Education* 18 (Spring 1987): 150-54. EJ 356 146.

Heilbroner, Robert L. "Fundamental Economic Concepts—Another Perspective." *Journal of Economic Education* 18 (Spring 1987): 111-20. EJ 356 142.

Kourilsky, Marilyn; Ballard-Campbell, Michael "Mini-Society: An Individualized Social Studies Program for Children of Low, Middle, and High Ability." *Social Studies* 75 (September-October 1984): 224-28. EJ 305 961.

Kourilsky, Marilyn "School Reform: The Role of the Economic Education." *Economic Education* 17 (Summer 1986): 213-17. EJ 338 250.

Laney, James D. "Hotdogaronia: Mini-Society In A Texas Classroom." *Southwestern Journal of Social Education* 15 (Spring-Summer 1985): 15-18. EJ 336 763.

Laughlin, Margaret A. "Infusion—No Addition: Infusing Economics in the Elementary Curriculum." *Social Studies Review* 23 (Fall 1983): 29-32. EJ 290 595.

Lawson, Luther D.; O'Donnell, Margaret G. "Identifying Factors That Influence the Learning of Economics: A Sixth-Grade Case Study." *Economics Education* 17 (Summer 1986): 177-85. EJ 338 244.

Longshaw, John M. "Teaching Trade Union Studies in a Primary School." *Economics* 23 (Summer 1986): 65-66. EJ 338 301.

MacDowell, Michael A. "Response to L. Scott Miller." *Economic Education* 17 (Summer 1986): 210-12. EJ 338 249.

Manzer, John P. "New Economic Education Resources for Business Educators." *Business Education Forum* 41 (January 1987): 8-10. EJ 344 815.

Mathis, Edward J. "How A Market Operates: A Classroom Exercise in Supply and Demand." *Social Studies* 78 (July-August 1987): 173-77. EJ 357 444.

Muma, Patrick A. "Where Economists Teach." *International Social Science Journal* 39 (August 1987): 425-33. EJ 358 594.

O'Donnell, Margaret G. "Using the History of Economic Ideas to Teach Social Studies." *Social Studies* 78 (May-June 1987): 118-22. EJ 356 164.

Reque, Barbara "Making Choices: Studying Your Community's Economic History." *Social Education* 47 (January 1983): 32-35. EJ 275 252.

Samuelson, Paul A. "How Economics Has Changed." *Journal of Economic Education* 18 (Spring 1987): 107-10. EJ 356 141.

Schug, Mark C. "Children's Understanding of Economics." *Elementary School Journal* 87 (May 1987): 507-18. EJ 355 923.

Schug, Mark C.; Birkey, C. Jean "The Development of Children's Economic Reasoning." *Theory and Research in Social Education* 13 (Spring 1985): 31-42. EJ 317 507.

Soper, John C.; Brenneke, Judith-Staley "The Test of Economic Literacy and an Evaluation of the DEEP System." *Journal of Economic Education* 12 (Summer 1981): 1-14. EJ 250 370.

Strober, Myra H. "The Scope of Microeconomics: Implications for Economic Education." *Journal of Economic Education* 18 (Spring 1987): 135-49. EJ 356 145.

VanSickle, Ronald L. "Economics Goes to the Fair: Problems for Projects." *Georgia Social Science Journal* 18 (Summer 1987): 29-36. EJ 358 555.

Walstad, William; Watts, Michael "Teaching Economics in the Schools: A Review of Survey Education." *Journal of Economic Education* 16 (Spring 1985): 135-46. EJ 319 114.

Review of High School Economics Textbooks

Author Turley Mings Publisher Dushkin

Title The Study of Economics: Principles, Concepts & Applications Copyright Date 1987

Grade Reading Level 11 Readability(Grade and Basis) Excellent

I. Criteria	Excellent	Good	Fair	Poor	Lacking
Physical Characteristics					
1. Quality of construction	[✓ 4]-	3	2	1	0
2. Readability of type style	[✓ 4]-	3	2	1	0
3. Organization and layout	[✓ 4]	3	2	1	0
4. Visuals, well located, variety	[✓ 4]-	3	2	1	0
5. Student appeal	[✓ 4]-	3	2	1	0
6. Avoids racist, ethnic and sexist stereotyping	[✓ 4]-	3	2	1	0
7. Positive image of women and minorities	4	[✓ 3]	2	1	0
II. Features					
8. Current or recent examples	[✓ 4]	3	2	1	0
9. Examples relevant to generalizations and abstract concepts	[✓ 4]	3	2	1	0
10. Uses case studies	[✓ 4]	3	2	1	0
11. Variety of student activities	4	[✓ 3]	2	1	0
12. Requires higher level thinking skills	[✓ 4]-	3	2	1	0
13. Chapter introduction and summary	[✓ 4]	3	2	1	0
14. Varied viewpoints, unbiased	4	+[✓ 3]	2	1	0
15. Glossary	[✓ 4]	3	2	1	0
16. Bibliography	[✓ 4]	3	2	1	0
III. Supplemental materials and aids					
17. Teacher's Guide	4	[✓ 3]-	2	1	0
18. Workbook, study guides, student handouts	4	[✓ 3]	2	1	0
19. Tests	4	[✓ 3]	2	1	0
IV. Concepts					
20. Basic Economic Concepts	[✓ 4]	3	2	1	0
21. Microeconomics	[✓ 4]-	3	2	1	0
22. Macroeconomics	[✓ 4]	3	2	1	0
23. Other Economic systems	[✓ 4]-	3	2	1	0
24. Measurement and methods	4	[✓ 3]	2	1	0
25. Contrasting Economic Views	4	[✓ 3]	2	1	0
Totals	64.0	24.0	—	—	—

Total Evaluation Points 88.0 Average for the Criteria (total)/25 3.52

Hard Cover, 498 + 46 pages

Plus or minus signs indicate that individual reviewers did not agree and position indicates the direction of the disagreement.

Comparing Textbook with Fundamental Concepts

Fundamental Economic Concepts	Stressed	Adequately Covered	Lightly Covered	Omitted Entirely	Correctly Used	Unbiased
Scarcity	X				X	X
Opportunity Cost and Trade Offs	X				X	X
Productivity		X			X	X
Economic Systems	X-				X	X
Economic Institutions and Incentives	X-				X	X
Exchange, Money and Interdependence	X	+			X	X
Microeconomics	X				X	X
Markets and Prices	X				X	X
Supply and Demand	X				X	X
Competition and Market Structure	X-				X	X
Income Distribution	X				X	X
Market Failures		X			X	X
The Role of Government	X-				X	X
Macroeconomics	X				X	X
Gross National Product	X				X	X
Aggregate Supply and Demand	X				X	X
Unemployment	X				X	X
Inflation & Deflation		+X			X	X
Monetary Policy and Fiscal Policy		+X			X	X
International Economic Concepts	X				X	X
Absolute and Comparative Advantage Barriers to Trade	X				X	X
Balance of Payments and Exchange Rates	X				X	X
International Aspects of Growth and Stability	X				X	X

A plus (+) indicates that one reviewer was higher than the others

A minus (-) indicates that one reviewer was lower than the others

BEST COPY AVAILABLE

Title: The Study of Economics

Author: Turley Mings

While this text might be best classified as analytical, it is done painlessly and frequently in a historical, consumer, problem-solving context. The organization is similar to most one semester college texts: foundations, microeconomics, macroeconomics and international economics. However, it is definitely geared to the broad range of average students, perhaps slightly above average.

This book is physically attractive, enhanced by appropriate use of color for charts, graphs, photos and lines for emphasis in the text and setting off special features. Main ideas are presented in boldface and important vocabulary terms are underlined lightly. Marginal notes reinforce main ideas for the student.

Each chapter begins with a contemporary application or introductory article that is designed to capture the students attention such as cigarette smoking and the break up of AT&T. Chapter previews identifying economic concepts and learning objectives follow. Within the chapter,case applications or case studies using such examples as McDonald's, rock concerts and Soviet free enterprise expand upon the concepts. These are followed by thought questions at several levels of difficulty. Other features found in many chapters are important economists, historical examples and current economic trends, Chapter review materials include a summary section, study questions which are truly thought provoking, "Exercises and analysis" involving individual activities and an annotated bibliography. All the above are better thought out and placed than most texts. In the appendix, charts and graphs are explained clearly. The glossary includes major page references set out in bolder type for easy reference.

Supplementary materials include a "Student Workbook," "Testing," "Instructor's Guide," "Micro-Computer Test Generator Program," "Micro-Computer Study Guide Program" and an "Instructional Transparency Set." At the time of this review only the first chapter of the first three items was available. The reviewers found these to be disappointing. In each instance the complaints were that the material drew almost exclusively from the text, contained no teaching strategies and that very few of the questions required critical thinking.

Quotations from Reviewers

Favorable: "The visual appeal of the text, from graphs and charts to pictures and illustrations is enhanced by the tasteful use of multi-color."

"The text is loaded with features that help students understand concepts and stimulate interest."

Unfavorable: "The somewhat 'heavy' use of ratios and graphs as explanation tools is simply not going to be effective with the marginal student."

"The teacher's guide is disappointing (based on one chapter sample)...it merely provides an overview of the chapter...and answers to the learning objectives..."

The author is an economist at San Jose State University and Director of the Center of Economic Education at the same campus.

Accuracy of Content

1. ________________✓ 4.

Inaccurate — accurate and good coverage

mean score	number of evaluations
3.7	15

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